

# GRAIN & FEED JOURNALS

## CONSOLIDATED

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# Directory of the Grain Trade

In Organized Markets Only Members of the Local Grain Exchange Will Be Listed

*HAVING YOUR name in this directory will introduce you to many old and new firms during the year, whom you do not know or could not meet in any other way. Many new concerns are looking for connections, seeking an outlet or an inlet, possibly in your territory. It is certain that they turn to this recognized Directory, and act upon the suggestions it gives them. The cost is only \$10 per year.*

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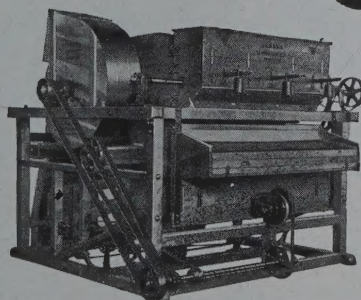
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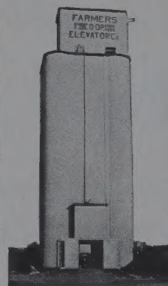
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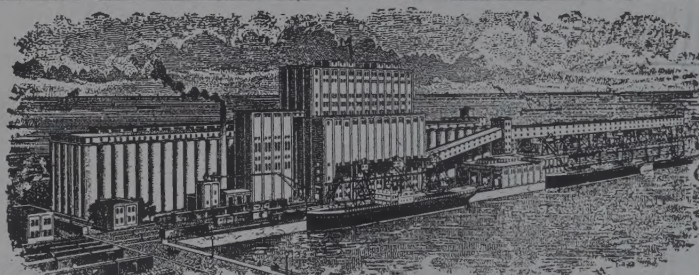
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AMERICAN ELEVATOR & GRAIN TRADE  
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PRICE CURRENT—GRAIN REPORTER

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## FOR SALE

One 2S-16 Gruendler, 50-hp. motor; one Miracle Ace direct connected to 60 hp.; one double head 30" Robinson Attrition mill, direct connected to two 30 hp. motors; one Monarch friction clutch flour packer; two No. 3 Barnard & Leas plan-sifters; one Barnard & Leas heavy duty friction clutch bran packer; one Munson one ton horizontal mixer, complete with motor. D. E. Hughes Co., Hopkins, Mich.

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**SURPLUS EQUIPMENT**—Immediate delivery SONANDER Portable Automatic Sack, Scale SONANDER Stat, Automatic Grain Scale FAIRBANKS Percentage sugar-beet Scales BURTON REBUILT one ton horizontal mixer. GRUENDLER NO. 3 WHIRLBEATER HAM-

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**USED**—Type K-33 MUNSON, single motor driven Attrition Mill, direct connected to 15-HP, 3 phase, 60 cycle, 220 volt motor.

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**USED**—GRUENDLER all stainless steel Food Grinder with 2-HP. motor.

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State fully your requirements.

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Owner		
Hauler	Grain	Grade
		Dockage
		%
Gross		
Tare		
Net		
Total Dockage		
Net Pounds		
Bushels		
Price	Amount \$	
Storage Ticket No.		
Check No.		
	Station	
No.	19	
	Weigher	
Name of Firm or Buyer		

(Illustration is one-half size of original ticket.)

Using Form 19GT as a scale book saves much time and labor as one writing with the use of carbon will give you a complete record and a ticket for the hauler.

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327 S. La Salle St., Chicago, Ill., U.S.A.  
Charles S. Clark, Manager

A merger of  
GRAIN DEALERS JOURNAL  
Established 1898

AMERICAN ELEVATOR &  
GRAIN TRADE  
Established 1882

THE GRAIN WORLD  
Established 1928

PRICE CURRENT - GRAIN REPORTER  
Established 1844

Published on the second and fourth Wednesdays of each month in the interests of better business methods for progressive wholesale dealers in grain, feed and field seeds. It is the champion of improved mechanical equipment for facilitating and expediting the handling, grinding and improving of grain, feeds and seeds.

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THE ADVERTISING value of the Grain & Feed Journals Consolidated as a medium for reaching progressive grain, feed and field seed dealers and elevator operators is unquestioned.

Advertisements of meritorious grain elevator and feed grinding machinery and of responsible firms who seek to serve grain, feed and field seed dealers are solicited. We will not knowingly permit our pages to be used by irresponsible firms for advertising a fake or a swindle.

LETTERS on subjects of interest to those engaged in the grain, feed and field seed trades, news items, reports on crops, grain movements, new grain firms, new grain elevators, contemplated improvements, grain receipts, shipments, and cars leaking grain in transit, are always welcome. Let us hear from you.

QUERIES for grain trade information not found in the Journal are invited. The service is free.

CHICAGO, ILL., JULY 22, 1942

THE CORN BORER has blasted the hopes of many Indiana corn growers.

COUNTRY GRAIN BUYERS must insist on farmer tendering grain for sale to show his 1942 market card, otherwise they will encounter trouble.

SO MUCH rye is appearing in new wheat tendered Nebraska grain buyers, the discounts amount to considerable in excess of the cost of clean seed.

COUNTRY BUYERS who neglect to discount low-grade grain are sure to suffer sad disappointment when they receive returns from their shipments.

SOFT WHEAT MILLERS are complaining most bitterly because the short crop is enabling the C. C. C. to tie up most of the wheat offered with long time loans.

THE GRAIN BUYERS who take in combined wheat that is not dry must keep a close watch of their purchase lest it deteriorate through heating and sprouting.

WHEAT FARMERS of different sections of the land continue their opposition to the 49 cent penalty, and no one who believes in the right to plant as he pleases will question the farmers' protests.

ELEVATOR OPERATORS handling side-lines have succeeded in inducing many slow payers to come in and settle for old accounts because of the Government's restrictions on credit. If more merchants having a large number of slow accounts would exercise greater vigilance in collecting, the number and the volume of slow accounts would be greatly reduced.

A FEW shippers there still are who do not weigh the grain loaded out into cars and run the risk of not collecting for shortages, as in the recent case of one shipper to the Chicago market where the weighing department discovered a depression in the grain that led to the detection of a hole in the floor of the car that the thief had plugged after stealing perhaps a hundred bushels. Unable to establish how much had been loaded, the shipper could not make claim against the railroad company. A dependable shipping scale has always proved a profitable investment.

WIRES have been hot between members of the feed trade and Washington officials over the ODT order that requires trucks to carry a 100 per cent load one way, and a 75 per cent load on return, due to be effective July 15. Up to July 14 the feed trade was still holding to its contention that its members can not operate under such regulation, for when a delivery of feed is made by truck to a farmer, or to a retail point, there is nothing needed by the feed mill from such point to be picked up. On that date ODT announced cancellation of the requirement for carrying a 75 per cent load on the return trip.

STUDENTS of Consumer Credit Regulation W explain that the easiest way to remember the regulation, is that it applies to listed items which are subject to price ceilings. Where no price ceilings are involved, no credit regulation applies. This indicates that the credit regulation applies to such items as fencing, farm machinery, etc., but it does not apply to such items as mixed feeds, field seeds, and such services as feed grinding and feed mixing. Nonetheless, it is presumable that grain dealers who have suffered from the credit evil for many years, will seize the spirit of the order to urge their customers to settle all bills by prompt payment, by note, or by making arrangements for regular payments to clean up old accounts. Nothing discourages real profits more than an overload of Accounts Receivable that cannot be collected, or that eat themselves up in interest and collection costs.

GRAIN MERCHANTS who delight in working on the smallest margin possible for safe merchandising will be greatly disappointed when they compute the effect on their business of the new Federal tax law.

COMPLAINTS by country shippers that permit committees were unjustly restricting their choice of markets have been forestalled by the railroads getting the Interstate Commerce Commission to take the jurisdiction that is its by law. Wisely the Commission is functioning thru the experienced traffic men of the grain exchanges.

BUYERS OF GRAIN from truckers can easily determine effect on their scales when a trucker puts on the brakes under speed by conducting weighing tests of friendly truckers. Gypsy truckers have learned so many tricks for swindling the elevator man he must watch very vigilantly or he will pull a new one every trip. After dark deals are his delight.

MANY COMMUNITIES have attempted to protect their regular established merchants from cut-throat competition by transient peddlers and generally succeed in encouraging the tax dodgers to move on. One Iowa village which has suffered from seasonable violations of their transient merchant ordinances has obtained some satisfaction by re-enacting ordinances declared unconstitutional by changing a few words and putting the travellers to the expense of conducting another fight in the courts. Established merchants in every community are put to the expense of annual taxes and pay for the support of the schools, fire and police departments, and there is no good reason why they should be compelled to compete with nomads who appear only at the height of the season when business is good.

MANY PRIVATE CITIZENS, both in and out of the grain trade, heartily approve H. R. No. 6777, the bill introduced in the House by Representative John S. Gibson of Georgia, to amend the National Labor Relations Act. The proposed amendment demands only what is fair. It guarantees to employees the right to organize voluntarily free from discriminating action by employers, and protects such organization from gangster rule by providing recognition on the part of the National Labor Board only for labor organizations that possess a U. S. or Canadian charter, and have bonded officers and leaders who are citizens of either of these countries, and who have had at least six months' experience in the trade or vocation the organization represents. It would further protect union members by requiring union officers to issue complete annual statements of finances to members, as certified by independent C.P.A.'s; and by denying to such union officials any right to use union funds for political purposes.



## Meeting the Storage Emergency

All Europe is in need of food and in some countries 1000 deaths a day are credited to starvation, yet the Argentine, Australia, Canada and U. S. A. have bountiful surplus stocks which they would be glad to ship if safe transportation was provided.

In the hope of encouraging grain growers to hold surplus stocks of grain, the A. A. A. has loaned much more than the market value of several grains until all central market storage room has been filled to the roof, and yet the farmers have continued to grow in excess of home needs, without providing any safe storage for their oncoming crops. They did not credit the oft-repeated stories regarding the urgent need for more storage room, but now that the crops are harvested, the growers and the handlers are working night and day to provide additional space for storing the new crops.

This picture contains much information regarding the building of new storage facilities in all surplus wheat growing sections, and yet reports from the winter wheat belt tells of much wheat being piled out in the open. Idle buildings of every description are being converted into storage facilities in utter disregard of the fact that new grain should be watched carefully and turned frequently when it starts to heat.

Doubtless much of the wheat stored in large bulk will spoil, however grain dealers can, and no doubt will, do much to salvage the new grain. Grain merchants are not only greatly increasing their own facilities for the safe handling of new grain, but are also building and supplying storage tanks to farmers. Should the war continue for another year, doubtless, grain merchants will provide more storage room in the hope of protecting the surplus stocks from the elements and deterioration.

Lending money in excess of the market value of any grain does NOT discourage the production of more than is needed, but naturally the larger the increase in the production the greater will be the demand for modern facilities for protecting grain from deterioration.

It costs considerably more to dismantle, cart across the country, and re-erect steel tanks than it would to erect new storage units.

The existing regulations and restrictions of farmers' activities are so confusing to some and irritating to all that one cannot help but speculate on what will be the outcome of the bureaucrats domination of the poor farmer. Grain growers have always enjoyed the right to conduct their own business as seemed best for their own interest and in keeping with their own convictions.

The quick construction of temporary storage units of small capacity may bridge the emergency and save the farm-

er from great loss, but better preparation is hoped will be made before another crop is planted.

## Abandoning Unprofitable Rail Lines

The abandonment of a number of short rail lines have recently been authorized to the great disadvantage of owners of grain elevators on railroads right-of-way. Some grain merchants have had the courage to build new elevators apart from railroads right-of-way and still conducted profitable business. Whether other dealers can do as well remains for those deprived of rail shipping facilities to determine.

Before the advent of large trucks and trailers grain elevator owners as a rule threw up their hands and did not even try to continue in the grain business, when the railroads discontinued train service, but the large truck has brought independence to many grain merchants, who have continued marketing the grain produced in their communities profitably and without delay.

Among other lines which have recently been abandoned are the following:

The Southern Pacific railroad has been authorized by the I. C. C. to abandon a 21.09 mile segment of its lines in Stanislaus and Merced counties, Cal., between Montpelier and Merced.

The C. & E. I. railroad, in Finance No. 13667, has been denied authority to abandon its Judyville branch in Vermillion County, Ill., and Warren County, Ind., 13.27 miles between Ross-ville Junction and Judyville.

The War Production Board has ordered requisitioning and taking possession of rails and track fastenings in the C. & N. W. branch line, 103 miles long from Linwood, Neb., to Hastings, Neb. An I. C. C. permit to abandon the line was issued last December, but operation has continued thru the course of continuing litigation wherein the Nebraska Railway Commission has sought to force the railroad to continue permanent operation of the line. Following the W. P. B. order, the Ass'n of American Railroads issued notice that operation of the line may cease any day.

W. P. B. is understood to be issuing similar requisition orders in several other cases of line abandonment, even where such cases are still before the Interstate Commerce Commission and have not been decided. Authority for such action by W. P. B. is the Act of Oct. 16, 1941, which gives the federal government the right to requisition private property when and as needed for the nation's war effort.

The Chicago & Northwestern Railroad, 28 miles of tracks between Sycamore & Caledonia, Ill., ruled more valuable if its metals were converted into war materials, by a three judge federal court sitting in Chicago recently, the Illinois Commerce Commission and Attorney George F. Barrett to the contrary.

The St. Louis & San Francisco railroad between Fort Gibson, Okla., and Fayetteville, Ark., has been ordered abandoned and torn up by the W. P. B. The Tahlequah Mill & Elevator Co., Tahlequah, Okla., filed complaint with Representative Nicholas against the abandonment.

Illinois Central railroad, 57 miles of trackage between Red Oak, Ill., and Dodgeville, Wis.; service on the line will end July 25, J. L. Becen, president of the railroad, announced. The branch line will be scrapped and its metal used in war production.

## Proposed International Control of Wheat

Now, at a time when their thinking should be concentrated on winning the war, authorities in the United States, Canada, Argentina and Australia are planning to perpetuate the economic slavery brought on by the war, after the conflict, by setting up an international committee to control the world production, the exportation and distribution of wheat.

As a war measure, to insure victory, control is justified from every point of view. In time of peace government control is warranted by no consideration.

One buying nation, Great Britain, is added to the four selling nations in the cartel, as they call it in Hitlerland, who are to control the production, the export, the distribution and the price of wheat, allotting to each export country the maximum amount that it can hold as a surplus, a definite quota for delivery, and setting a price per bushel that farmers shall receive; binding, moreover, each producing country to a plan of acreage control, and assuring that the total amount of wheat to be exported is to be in relationship to the world effective demand.

Such peace-time control of wheat presents a picture not at all attractive to growers and handlers of wheat. It has never in past experience been possible for the powers that be to establish a price satisfactory to both growers and consumers.

Consumers are in the majority, they have the most votes, and it is safe to say the price will be fixed to the disadvantage of the grower. A ceiling has been placed on rentals in many parts of the United States because politically the tenants outnumber the landlords. No ceiling has been placed on wages, because the employees greatly outnumber the employers.

This month, after fighting for many weeks, the powerful farm bloc has had to concede the sale of government-owned wheat at reduced prices, thus artificially depressing the open market for wheat. Thus the proposed international control of wheat has no promise for the grower.

As to the merchandiser of wheat the prospect is equally bad. With fixed prices and controlled exports there will be no opening for good salesmanship. When merchandisers happen to have at their disposal any grain of a quality known by their expert knowledge to be superior they are sure to let the buyer know of the opportunity and to obtain a better price for the seller.

Under artificial control sales of wheat would diminish, surpluses would pile up and the control would try to reach back to the grower to force him to reduce acreage. Such reduction would not be applied to marginal producers as forced



by price competition, but on lands naturally adapted to wheat growing.

When the grower has to take a low price for his crop under competitive selling he realizes that the law of supply and demand is working against him; but when the price is set by an administrator the farmer with voting power can readily locate the government agency that is picking his pocket.

**CORN FEEDERS** of the U. S. A. made such a heavy dent in the corn stocks that some so-called crop experts now fear that the stimulated feeding of hogs and cattle is bound to exhaust the corn surplus. It is very evident that the increased supply of soybean and cottonseed meal combined with the 125,000,000 bushels of wheat to be sold to feeders at 85 cents per bushel will materially reduce the demand for corn. So long as the Government persists in lending more than the market value of any grain, new farmers are very likely to plant corn and market it surreptitiously.

## McKee's Concrete Elevator at Muscatine, Ia.

Muscatine, the county seat of Muscatine County, Iowa, celebrated its 100th birthday some years ago, but it keeps right on growing in new and prosperous industries. Over fifty years ago this river town gained prominence as the logs from the northern forests floated down the Mississippi to Muscatine's saw mills. Then it gained attention as the home of the best melons grown. Next forty-two pearl button factories advertised the city's great industry and now it has developed a prosperous grain business.

Recently it added the large reinforced concrete grain elevator illustrated on our outside front cover to receive grain in carlots for transfer to river barges. Few shipments of grain were made from Muscatine during the first thirty years of this century either by rail or water, but the low freight rates offered by barges has attracted a rapidly increasing volume of grain from many distant points both sides of the river.

The growth of the business of the McKee Feed & Grain Co., the last ten years has been from a local feed store to a modern reinforced concrete elevator of 155,000 bus. capacity which supplements its wood elevators and warehouse shown at the left in our illustration.

The new concrete elevator consists of nine bins, five of which are circular and 20 feet in diameter and 106 ft. high, three fan shaped and one small stairwell bin. The capacity of these bins ranges from 2750 up to 25,400 bushels, making a total capacity of 155,000 bus. The overall height of the entire building is 132 feet. It has facilities for loading and unloading carload shipments and is equipped with one elevator leg rated at 4500 bus. per hour. It also has a hand operated man-lift. In the basement is located one screw conveyor to discharge grain from the bins into the boot of leg.

All tanks and bins discharge either direct to elevator boot, or into a 14" screw conveyor which discharges into the elevator boot. From there it is elevated and can be spouted into the bins or be conveyed over to the processing plant. As the plant now is arranged it is only used for storage, but it was laid out so that the owner when he feels it is required, can install a 2500 bu. hopper scale with garner above and bin below the scale floor. Room is also provided for an extra elevator leg. J. B. Ehrsam & Sons Mfg. Co. furnished the machinery while Calumet Buckets were used for the leg.

Extra windows and ventilation were provided

ed and for the convenience of the operators a man-lift was installed, running from first floor to the distributing floor.

This concrete elevator was designed and built by the Ryan Construction Co.

For illustration see outside front cover page.

## Court Rules Against Burocratic Enrichment Orders

A food manufacturer may use a standardized name on his food product altho the product deviates from the standard, if the deviation is corrected by a label declaration.

Public health or nutritional education is no concern of the administrator of the Food, Drug and Cosmetic Act, and if he attempts to enforce regulations for that purpose he is exceeding his authority.

Those are the salient points in the decision June 26 by the U. S. Circuit Court of Appeals in favor of the Quaker Oats Co. and against Paul V. McNutt, administrator of the Act.

Farina has been made for many years by the Quaker Oats Co., and since April, 1932, years in advance of the present enrichment government program, it has been adding vitamin D, describing the product as "Quaker Farina Wheat Cereal, enriched with vitamin D."

The Administrator in Regulation 15.140 describes enriched farina as "conforming to the standard fixed for farina, except that it contains prescribed minimum quantities of vitamin B-1, riboflavin, nicotinic acid and iron." Therefore, according to the Administrator the Quaker Oats Co. could not describe its product as enriched farina unless it conformed to the standard by containing besides the vitamin D, riboflavin, nicotinic acid and iron.

The Court said, "the Administrator is authorized to promulgate regulations fixing standards whenever, in his judgment, 'such action will promote honesty and fair dealing in the interest of consumers.' Thus, his action in the interest of consumers is expressly limited to the promotion of honesty and fair dealing in their behalf.

"That the promotion of honesty and fair dealing was intended by Congress to mean something other than the promotion of the consumers' health is plainly ascertainable from a study of the Act. Likewise, it is clear that action was not authorized merely to avoid confusion on the part of consumers, nor to educate the public as to dietary requirements. If Congress had so intended, it would, no doubt, have employed the appropriate language.

"If defendant's contention be accepted that he has the authority to fix a standard as to the ingredients of a food which is truthfully labeled, then it would seem to follow that the statute indicts as misbranded that which, as a matter of fact, is correctly branded. This is the tortious result achieved by attempting to promote a dietary standard rather than honesty and fair dealing, as the Statute requires.

"How the contention that confusion is likely to result from a product, such as petitioner's, which truthfully informs the consumer as to what he is buying, can be reconciled with the contention that a product sold as enriched farina, without any further description, will lessen or avoid confusion, is beyond our comprehension.

"Another unreasonable and, we think, arbitrary result of these regulations is that petitioner is precluded from adding vitamin D to its product, as it has done for many years and, at the same time, permitted to add vitamin D as an optional ingredient in enriched farina. We say it is unreasonable for the reason that no claim is made of any relationship or co-action between vitamin D and the other ingredients required in enriched farina. As a result, the consumer who is deficient in vitamin D only, as is often the case, must buy a product containing vitamins and ingredients which he does not need, or does not want, in order to obtain the benefit of vitamin D.

"Another unreasonable result, so we think,

is that by the exclusion of vitamin D from petitioner's product, many people will be deprived of this admittedly essential vitamin. This result is none the less real by reason of the suggestion that milk is the most appropriate carrier of vitamin D, and that the majority of consumers (infants and children) who use petitioner's product are also large consumers of milk. There might be merit to this suggestion but for the fact that vitamin D is not a substantial ingredient of milk or any other natural food product in ordinary use. Thus, in order to obtain this essential vitamin in milk, it must be added thereto.

"Looking at the realities of the situation, we think this would mean that very few of the so-called low income group would receive sufficient vitamin D. Too many of them, no doubt, are without the necessary amount of milk, much less milk to which this vitamin has been added. So, as a final result, the regulations are responsible for a situation whereby a consumer is precluded from obtaining vitamin D alone in connection with farina."

## Co-operative Member Entitled to Value of Shares Sold

The Colwell Grain Exchange, Colwell, Ia., decided at a meeting of directors Sept. 14, 1936, to reorganize under Chapter 390.1, and a letter was sent to stockholders offering \$12.50 per share for their holdings.

One Snyder sold her four shares to the corporation for \$50; but later learned that non-resident stockholders who voted "no" were paid \$61.49 per share and brought suit against the exchange to recover the full value.

When 371 shares were outstanding an auditor's report showed net value of the assets to be \$19,495.19.

The court found that the transaction was a constructive fraud upon the plaintiff to her damage in the amount of \$12.00 per share.

The court considered a loss of \$2,500 during the fiscal year prior to June 1, 1937, in determining the value of the assets. On appeal to the Supreme Court of Iowa the decision was affirmed May 5, 1942.—3 N. W. Rep. (2d) 507

## Buyer Must Pay for Feed Not Misrepresented

W. W. Cox, a feeder of Boone County, Nebraska, went to a feed merchant at Albion, Neb., who told him 6½ tons of Fatena would put 250 lbs. weight on each of his 21 hogs.

Cox ran out of feed Dec. 26, 1936, after feeding from August, two hogs died, and the remainder were shipped, the proceeds of sale failing to reach the amount due for the feed by \$72.16.

All his dealings were with the local merchant, who took his promissory note to be paid on or before Feb. 1, 1937, secured by a lien on the hogs, which note came to the Ralston Purina Co.

The Ralston Purina Co. brought suit on the note, and from a judgment dismissing the petition took an appeal from the district court of Boone County to the Supreme Court of Nebraska, which reversed the decision and gave the Ralston Purina Co. judgment for the full amount.

Defendant testified "Q. And these hogs did fine on this feed? A. They did as long as it lasted. Q. And you believe for mature hogs it would have done, what they claimed. A. I believe so. Q. It was pretty good feed? A. Yes, as far as it went, the only thing I am kicking on they got all the security and I figure they have enough."

The court said "Representations which merely express the vendor's opinion, belief, judgment or estimate do not constitute a warranty. Dealer's talk is permissible; and puffing, or praise of the goods by the seller, is no warranty."—9 N. W. Rep. (2d) 748.



## Asked—Answered

[Readers desiring trade information should send query for free publication here. The experience of brother dealers is most helpful. Replies to queries are solicited.]

### Wage and Hour Laws for Elevators?

**Grain & Feed Journals:** We would appreciate it very much if you would send us information regarding wage and hour laws for elevators not in any way connected with flour mills. We would like to have this information for both the office and elevator crew.—Empire Elevator, Guthrie, Okla.

**Ans.:** Employees handling grain in an elevator located in the area of production and not exceeding 7 in number are exempt. This includes office or clerical employees of the elevator business. The exemption refers to Sec. 6 on minimum wages and Sec. 7 on maximum weekly hours. All are subject to Sec. 3, against employment of persons under 16 years of age.

### Are Corn Shellers Under Wage and Hour Law?

**Grain & Feed Journals:** I operate a corn sheller here and buy the snap corn from the farmers and shell it and ship it to other states and also do a local feed business. The Wage and Hour Division has me operating under this law. I think they are just putting something on me because they know it would be too expensive for me to fight it out with them.

The law plainly states that the handling, storing, shipping, etc., of agricultural products in their raw or natural state is entirely exempted from the wage and hour provisions of the law.

I contend that shelling of corn is certainly handling it in the raw or natural state, and have so argued with them, but nevertheless they class me as coming under this vicious law and are forcing me and a number of other shellers in this section of country to abide by it.

Are the corn shellers in the corn belt having to abide by this law or not?—Chas. P. Noell, Covington, Tenn.

**Ans.:** It is our opinion that the operator of a shuck sheller is exempt the same as operators of shellers in the corn belt.

### Government Crop Report

Washington, D. C.—The indicated production July 1 is reported by the Crop Reporting Board as follows, with 1941 production in parentheses: Corn, 2,627,823,000 (2,672,541,000); wheat, 904,288,000 (945,937,000); oats, 1,303,114,000 (1,176,101,000); barley, 403,345,000 (358,709,000); rye, 58,213,000 (45,191,000); flaxseed, 41,592,000 (31,485,000 bus.).

**SOYBEANS.**—The acreage of soybeans grown alone for all purposes this year is estimated to be 14,241,000 compared with 9,996,000 acres last year. This is an increase of 42.5 per cent over last year's acreage, and about 35 per cent greater than the previous record acreage grown in 1940. In Illinois, the leading soybean state, the increase is 40 per cent over 1941. Iowa, with the second largest soybean acreage, expects an increase of 70 per cent. Indications in Indiana show an increase of 47 per cent, in Ohio 52 per cent, and in Missouri 51 per cent.

**DRY FIELD PEAS.**—The acreage for harvest in 1942 of dry field peas (including seed peas) in the 7 states in which this crop is of importance is estimated at 458,000 acres or 61 per cent more than the 284,000 acres harvested in 1941. The heaviest increase has taken place in the two major producing states of Washington and Idaho which this year have more than 80 per cent of the total acreage.

### Coming Conventions

Trade conventions are always worth while, as they afford live, progressive grain dealers a chance to meet other merchants from the same occupation. You can not afford to pass up these opportunities to cultivate friendly relations and profit by the experience and study of others.

Oct. 12-13.—Grain & Feed Dealers National Ass'n, Excelsior Springs, Mo.

Oct. 12-13.—Missouri Grain, Feed & Millers Ass'n, Elms Hotel, Excelsior Springs, Mo.

### Fluorescent Lighting in the Elevator

Fluorescent lighting, in the short time since it was made commercially available, has sprung into common use in the offices of country grain shippers. First place where fluorescent lighting is applied is over the scale beam, but most grain dealers, enjoying soft, nearly shadowless lighting at the scale beam, soon equip their entire offices with fluorescent lights.

Application of fluorescent lighting to the elevators, however, has not come into general use. In a dusty atmosphere, and most country elevators have a dusty atmosphere at one time or another in spite of all efforts to keep them clean, fluorescent lighting equipment is apt to introduce a serious fire hazard, unless it is designed and built to meet Underwriter's specifications.

These specifications require that the fluorescent lighting unit be of the enclosed type, without ventilating openings of any kind, and that the enclosure be fitted with a cover-glass which will prevent appreciable accumulation of dust on the tubes. The starting and control equipment should be enclosed in a dust-tight housing, and the temperature of the housing should not exceed 200 degrees F. in continuous operation, even tho the housing is covered with dust.

Fluorescent lighting fixtures used in dusty places should carry the label of the Underwriters' Laboratories, Inc., and of Electrical Testing Laboratories. Reasons for such specifications are given by the Mill Mutuals as follows:

Fluorescent tubes would be seriously affected by an accumulation of dust, since the blanketing effect would raise the tube temperature and reduce the light output. Frequent cleaning would seriously increase the hazard of tube breakage, and the breakage of a fluorescent tube in a dusty atmosphere is just as dangerous as the breakage of a tungsten filament bulb. It follows that a minimum requirement for a fixture to be used in a dusty location would call for enclosed construction without ventilating openings or louvers and with a cover-glass fitted sufficiently well to prevent appreciable dust accumulations on the fluorescent tubes.

Starting and control equipment may introduce a serious hazard. These units must be provided with a starting mechanism which will light the filaments when the current is turned on, and will cut them out as soon as the mercury vapor arc has been established through the tube. This operation involves a make and break contactor which may be thermal or magnetic in design. Also it is necessary to use a current-limiting ballast coil or choke coil to limit the current taken by the tube after it gets started, and some of the larger lighting units require an auto-transformer to provide the necessary starting voltage. These various portions of the control equipment generate considerable heat under operating conditions, and it is necessary not only that the control equipment be placed within a dust-tight enclosure, but that the design and dimensions be such that the temperature of the enclosure will remain within safe limits.

Improper design may result in a device that would be unsafe to operate even in a non-hazardous location, and improper characteristics in the control equipment may result in inefficient operation of the tubes. Underwriters' Laboratories label on a completely wired fixture is assurance that the unit is properly designed and built for safe operation under ordinary conditions.

### Indianapolis Wheat Discounts

The Indianapolis market started the new wheat season July 3 with the same discounts applying generally on new "free" wheat as were applied last year, except for moisture. The new discount for moisture is 1½¢ for each ½% of moisture up to 16%. Above this amount the discount is 2¢ for each ½% of moisture. Here is the 1942 discount schedule:

BASE—Contract Grade: No. 2 Red Wheat, 58 lbs., 14% moisture, 4% damage, 2% foreign material, 1% MIXOG.

Discounts apply from above grading factors

TEST WEIGHT		MOISTURE	
Wt.	Disc.	Per cent	Disc.
57½ lb.	1½¢	14½%	1½¢
57 lb.	1¢	15%	3¢
56½ lb.	2¢	15½%	4½¢
56 lb.	3¢	16%	6¢
55½ lb.	4¢	16½%	8¢
55 lb.	5¢	17%	10¢
54½ lb.	6¢		
54 lb.	7¢		
53½ lb.	8½¢		
53 lb.	10¢		

Damaged Grains—starting at 4%—¾¢ disc. for each 1% or fraction thereof.

Smut or Garlic—1 to 15¢ disc. per bushel according to amount of smut or garlic.

F. M.—(Rye mixture)—1¢ disc. for each 1% starting at 2¢ ending at 7%.

M.E.O.G.—(Cockle)—1¢ disc. each 1% starting at 1%.

No. 1 Red—1¢ premium.

Subject to change without notice.

### H. S. Antrim Passes On

Hugh Seymour Antrim, Sr., former prominent member of the Cairo, Ill., grain trade, and president of Cairo's Board of Trade, passed away at Phoenix, Ariz., July 3.

Mr. Antrim was born in St. Louis, Mo., Oct. 14, 1867, the son of John and Eliza Parr Antrim, a pioneer Irish family that originally came to this country as members of William Penn's colony.

John Antrim, once wealthy and prominent citizen of Southern Illinois, lost his fortune during the Civil War. Shortly thereafter Hugh Seymour Antrim was born, and the family moved to Cairo.

Hugh Seymour Antrim was educated in Cairo schools. At the age of 14, he became a clerk in the grain firm of C. M. Howe & Brother. Eventually he became proprietor of this business, during Cairo's palmy days as the oats center of the world.

He was active in civic affairs, a member of numerous clubs and civic bodies, and a member of the school board for many years.



H. S. Antrim, Cairo, Deceased



## Southwestern Dealers Use Empty Structures for Storage

Resourcefully doing their best to meet the crying need for more storage space in their respective communities, and to relieve their elevators of a sufficient amount of C.C.C. wheat to make room for handling the new wheat crop, Southwestern grain dealers have been renting empty garages, warehouses, churches, skating rinks, etc., and converting them into bulk storage space.

Such conversion of other types of buildings into wheat storage space has met with the approval of the Commodity Credit Corp., whose wheat is being transferred from elevators into them so far as possible. The C.C.C. requires the grain dealer to put up 30c per bu. bond, and to assume responsibility for the quality of the grain. But grain dealers with bulging elevators, knowing the need for developing turning room in their elevators, and for providing storage space for new wheat under conditions which will permit turning it, have accepted such responsibility in an effort to serve their farmer patrons.

The grain dealers are not oblivious to the risk involved. In many cases they are attempting to load rented buildings so that wheat stored in them may be hand turned, or turned by means of a farm hiker should this become necessary. Further, they are watching carefully the quality of the wheat put in such storage. It must be dry, and it must be free of live weevil.

The buildings rented are turned into huge bulk bins by sheathing up walls where necessary, by building walls, and by rodding, to withstand the lateral pressure exerted by heavy piles of wheat.

THE FARMERS COOPERATIVE ASS'N at Sabetha, Kan., managed by W. E. Mettlen,

has rented the 60x72 ft. back part of a former Swift produce plant now occupied by a local butter, egg, and produce company which is using only the front part of the building. The portion of the building rented has six ventilators in the roof, a 2-inch tongue-and-groove floor, and walls supported by 3x6-inch joists, 3½ ft. apart. Manager Mettlen's plans called for sheathing up the walls a distance of 5 ft. from the floor, and building a ramp from the outside so a truck could be driven right into the building and unloaded with a minimum of scooping. He figured the space would hold 17,000 bus. of C.C.C. wheat still in his elevators.

GORDON MARK ELEVATORS at Clay Center, Kan., has rented the front part of a brick garage two blocks from the elevator. Walls were built in two ends of the portion of the garage rented, windows were boarded up, and the building was rodded, and 9,000 bus. of C.C.C. wheat poured into the big bin created, by means of a farm elevator spouting thru a hole in the roof.

FARMERS COOPERATIVE UNION ELEVATOR at Ellsworth, Kan., has rented a 146x32 ft. former garage and roller skating rink. This brick building has a concrete floor, and is 11 ft. high to the roof, and has a double entrance door thru which trucks may be driven. Manager P. J. Nash says the building will hold 30,000 bus.

THE FARMERS UNION COOPERATIVE ASS'N at Axtell, Kan., managed by E. W. Bergmann, has used its old coal sheds for wheat storage bins for the last five years. The seven bins will hold 3,000 bus. Manager Bergmann's early experience taught him to lay wood floors over stringers over the concrete bottoms of the bins so as to create an air

pocket, and thus prevent the wheat from drawing moisture thru the old type concrete. Each bin of the 18x48 ft. building holds 700 bus. Manager Bergmann's practice has been to rent these bins to farmers to supplement farm storage. The wheat thus carried is protected with insurance carried by the company, the insurance charge being covered in the rental fee.

MILTON BOSSE, at Ellinwood, built a flat bin type of storage building a year ago and filled it with wheat. The project proved successful, so this year he built wings on the building to create a 60x90 ft. flat bottom structure with three huge bins holding a total of 60,000 bus. The three bins are well rodded. A short elevator leg at one end of the building, and two screw conveyors, one in a conveyor tunnel thru the middle of the building, and one under the ridge of the roof, makes it possible to turn the grain and to load it in and out. A blower at the railroad siding can be used for direct loading of cars. Concrete floors of the building are covered with lapped roofing paper, which Mr. Bosse says virtually cements itself to the floors under pressure of wheat.

Mr. Bosse's venture brings the total of his storage space at Ellinwood to 250,000 bus. He figures that a day will come when all the temporary storage space built will prove a drag on the market. So he has built his flat storage in such a manner that it may be used later for warehousing other products, or for a garage.

NO GRAIN DEALER looks upon the temporary storage buildings being converted, or built, as entirely satisfactory. Their use is admittedly expensive since so much hand labor is necessary to fill and empty them. But elevators in the hard winter wheat belt are full of wheat, and it becomes a matter of using whatever is available in the emergency.

Yet, in spite of all efforts, grain dealers feel sure that vast quantities of new wheat will have to be piled on the ground. Inquiries reaching them before harvest indicated farmers had not built storage to the extent hoped, and were de-

[Concluded on page 60.]



Upper left: Gordon Mark Elevator, Clay Center, Kan., filled rented garage with 9,000 bus. old C.C.C. wheat by means of farm elevator. Lower left: Former garage and roller skating rink rented by Farmers Union Cooperative Elevator at Ellsworth, Kan., to hold 30,000 bus. C.C.C. wheat. Upper right: Seven coal bins of Farmers Union Cooperative Ass'n at Axtell, Kan., hold 3,000 bus. wheat. Lower right: Flat bottom storage building of Milton Bosse, Ellinwood, Kan., has three large bins, holds 60,000 bus.



## Letters from the Trade

[The grain dealers' forum for the discussion of grain trade problems, practices and needed reforms or improvements. Dealers having anything to say of interest to members of the grain trade are urged to send it to the Journals for publication.]

### A Safe Margin Always More Desirable

*Grain & Feed Journals*, Consolidated: At one of our recent meetings a neighbor, and his name is not Hy Overbidder, made an appeal to the grain dealers present that it was much more profitable to do business on a narrow margin and turn over all of our working capital more frequently. The more I think about this appeal for cut-throat competition the more I am convinced that safe business rejects the narrow margin policy.

Supposing my neighbor had an operating capital of \$20,000 and he attempted to do business on a margin of 7%, that would net him \$1,400 every four months or \$4,200 for a year. While if he tried to get 10% on his \$20,000 and be satisfied to turn over his operating capital twice during the year then he could only expect to realize a net profit of \$4,000.

Quick sales and smaller profits may be the controlling factor in soliciting trade for cheap goods, but I cannot convince myself that a buyer of cheap goods is ever satisfied with his purchase. He always has a hankering for the better goods. The best quality obtainable is always the most durable and the only goods that give real satisfaction.

In attempting to work on a 7% margin and turning over invested capital three times a year the merchant may realize an extra profit of \$200 a year but net returns from the venture is so uncertain and the worry and extra care of looking after 50% more details is worth much more than the extra \$200. Hurry always makes for costly blunders and waste.

I don't want to handle cheap side-lines. I would rather cater to the better class of farmers who are looking for quality, and customers who pay their bills. As I look over the slow accounts on my ledger I always find that the buyers looking for cheap stuff are generally the last to pay their bills. Give me the stable buyer who seeks and is willing to pay promptly for quality goods, and I will give up any chance of realizing \$200 more a year. I regret that there are not more merchants who are willing to work 50% harder just for the chance to add 5% net, instead of trading in quality goods, that is sure to realize them 10% profit and a lot of satisfied customers.—W. R. Milton.

### Southwestern Dealers Use Empty Structures for Storage

[Continued from page 59.]

pending upon grain dealers as they had in the past, not fully realizing that so little space is available.

Greatest problem has been wheat raised under a landlord-tenant relationship. Landlords have not wanted to build farm storage for their tenants; tenants have not wanted to build farm storage for absentee landlords, and a large share of the wheat acreage is land which bears no farm buildings.

Developments in the wheat country fulfilled the fears of the grain dealers that the wheat storage problem would become virtually unmanageable by the time harvest was well started.

Late news reports told of a western Kansas farmer who, in desperation, cleared furniture and prized possessions from the living room of his house and filled it with new wheat. A hotel in Vega, Tex., west of Amarillo, had its windows boarded up and its rooms filled with wheat. A school house in Hemphill county, Tex., was

boarded up for conversion into a wheat storage bin.

Commodity Credit Corp. worked as rapidly as possible from a belated start to move wooden farm bins to western Kansas for quick erection from prefabricated parts. But the wheat harvest moved inexorably on. In spite of every effort the flow of new wheat began to pile up on the ground for want of a better place to put it.

The number and size of the long ricks of new wheat piled out in the open subject to wind, and rain, and sun, are increasing the frantic efforts to find suitable cover.

Formation of the American Industries Salvage Committee, representing groups of leading industrial concerns who are working with the Conservation Division of the War Production Board to help speed the collection of vital scrap materials, has been announced by Robert W. Wolcott, chairman of the group and pres. of Lukens Steel Co.

If the buyer has no knowledge or reason to believe that the price paid or to be paid for the product is in excess of the maximum price for such commodity, evidence of his good faith, to be considered under all the surrounding circumstances including prior dealings with the same or similar vendors, will be afforded by his obtaining a written certification by the vendor that the price of the commodity is not in excess of the maximum price established by the Office of Price Administration. Such a certification may be contained in the contract or sale or invoice or may be a separate document transmitted to the buyer.

### Wm. Milner of Winnipeg Passes

William Edwin Milner, a past president of the Winnipeg Grain Exchange and former managing secretary of the Winnipeg Board of Trade, died July 1, aged 77 years.

He was a native of Brampton, Ont., a town of which he became mayor before removing to Winnipeg in 1907, where he managed the Maple Leaf Milling Co. For 8 years he was pres. of the Traders Building Assn.



W. E. Milner, Winnipeg, Man., Deceased.

### Ethide, a New Grain Fumigant

Ethide is a colorless liquid with a distinct odor and vaporizes readily. Chemically it is 1,1-dichloro-1-nitroethane, described as chlorinated nitroethane. The vapor is much heavier than air. The flash point is safe. The liquid can be stored and shipped in ordinary containers such as glass bottles, or lacquer-lined drums. The material is only very slightly soluble in water. It is soluble in petroleum oils; soluble in carbon tetrachloride, carbon bisulphide, and other organic solvents.

Detailed properties are: boiling point approximately 125° C.; specific gravity 1.397 at 20° C.; flash point 136.5° F.; solubility in water 1/4% at 20° C.; soluble in petroleum oils, glycerides, carbon tetrachloride, ethylene dichloride, carbon bisulphide; odor moderately lachrymatory but not a pronounced tear gas; effect on metals, will corrode iron in moist atmosphere. Apparently little or no effect on copper, brass, zinc, tin; effect on textiles, dyed materials, and furs, none discovered; effect on seed germination, apparently safe; effect on plants in foliage and on fresh fruits, harmful; effect on milling and baking properties of grain, apparently safe; disappearance of vapor from fumigated articles, rapid.

The penetrating properties of the vapor are extraordinary. For example, they will penetrate flour stored in tight paper bags. They will go thru tightly compressed cotton or other textiles. Also they will go thru waxed paper wrappings around packages and through the cardboard in which cereals are packed.

Applied on the surface of grain in a 60-foot storage tank, the vapor penetrates thru the grain and kills whatever insects may be present. Food-stuffs loaded in freight cars have been successfully fumigated merely by introducing the chemical on top of them and then sealing the car.

W. C. O'Kane of the Department of Entomology of the University of New Hampshire writes that ethide is not hazardous to human beings in the way in which some other fumigants are dangerous. With reasonable precautions it can be used safely.

Dr. O'Kane suggests the following fumigation procedure: While ethide has been used successfully at temperatures as low as 50° F., higher temperatures are to be preferred, both as regards the fumigating chamber and the articles to be fumigated. A desirable temperature is 70° F. or higher. Since ethide has high penetrating properties, the fumigating chamber should be gas-tight while fumigation is in progress.

Since the vapor of ethide is heavier than air, the chemical must be applied in the upper part of the fumigating chamber, or on top of the articles to be fumigated.

**METHOD OF APPLICATION.** Ethide will evaporate readily if the liquid is poured on any absorptive surface. Pieces of 1/2-inch celotex are excellent. An oblong of celotex 6"x12" will serve for 1/2 lb. of ethide. The required amount is poured on the oblongs of celotex in the requisite number, which are placed in the upper part of the fumigating chamber, or on top of the articles to be fumigated.

**THE FOLLOWING DOSAGES** have been found effective in a tight container where the insects are freely exposed to the gas (not buried in grain, etc.): 1.5 pounds per thousand cubic feet, fumigation period, 4 hours; 1.0 lbs., 8 hrs.

In fumigation of grain or grain products, stored in tight bins or silos, it is advantageous to use ethide in combination with carbon tetrachloride. Ethide is added to carbon tetrachloride in such amount that one gallon of the combination contains 2 lbs. of ethide (11 lbs. carbon tetrachloride and 2 lbs. ethide equals one gallon). One gallon of this combination is used per thousand bushels of grain. The liquid is poured on top of the grain. The carbon tetrachloride facilitates penetration of ethide down into the grain while still in the liquid phase. Fumigation is assumed to continue for 24 hours or more.

Ethide is in production by the Commercial Solvents Corporation, New York City, but in only limited quantity.



# Steel Bins Hold Wheat in Kansas

Faced with an unusual shortage of storage space in crowded public elevators in terminals, interior markets, and at country points, the Commodity Credit Corp. began a desperate search for means of storing the bumper new wheat crop of the Southwest.

A part of the solution worked out was movement of empty C.C.C. steel bins from corn belt areas to the hard winter wheat belt. Political expediency demanded something be done to satisfy the wheat farmers whose farm bins were bulging with 1939-1941 crops and who wanted to empty such bins for the new crop.

Allotment of steel bins by government farm agencies are reported to have called for movement of a sufficient number to western Kansas to hold 17,000,000 bus. of old wheat. The bins were to be transported by truck. The trucks were supposed to load up with wheat to be carried back on the return trip and stored in empty steel bins remaining in the corn belt.

Wheat harvest was delayed almost two weeks by rainy weather, which was more or less fortunate for the steel bin project, for in the last half of June many steel bins in the western half of Kansas were still in the course of erection.

Grain dealers interviewed reported the arrival of the tanks, but none of these grain dealers had observed any of the trucks carrying the tanks being loaded with wheat for the return trip. "So far as I could see," reported each, "the trucks left here empty."

But A.A.A. steel bins did arrive. In all known instances they have been set up in "farms" just outside the limits of the villages where they have been received. Presumably this practice enables county A.A.A. committees to escape corporate taxes, and to get necessary sites at low rental fees. It also locates the bins some distance from railroad sidings and from elevators, thru which the contents presumably must pass when shipping becomes possible.

Many grain dealers had hoped that the tanks would be used to relieve their over-burdened elevators of some of the weight of C.C.C. wheat they are holding in store. This, they reasoned, would make their elevators available for moving the new crop.

The hope proved vain. The steel bins have been filled with wheat from farm bins only. Elevators have had nothing to do with filling them. The most any elevator has received in the project is an allowance of 10c per load for weighing service. Sometimes the elevator has been asked to furnish the scale tickets with this service.

Elevator operators have been told "if there is any space left after farm storage needs are satisfied, we will accept wheat from your elevator to fill it." So far there has been no surplus of space. Bins erected have been insufficient in total storage capacity at any given point to hold all of the wheat from farm bins.

As originally erected in the corn belt, these

bins were placed on a tile or cement block ring, filled with sand or gravel. A similar foundation retaining wall is used at the new locations, but the "fill" is simply dirt, coned to the middle. Hardware stores have been raided to find new bolts to replace the many that were destroyed during dismantling, or lost in transit.

One move for the better, apparently growing out of county A.A.A. experience in the corn belt, is the declared intention of A.A.A. county committees to leave one bin at each tank farm empty, so that the contents of the other bins may be turned. In most cases, too, the bins are being filled by means of farm hikers, rather than thru blowers.

We are able to present herewith, pictures of the tank farms erected at Ellsworth, and Dorrance, Kan. Tank farms at other points present a similar picture.

Ellsworth has 34 bins of the 2,300 bu. size. Dorrance has 26. Makes of bins at each point are mixed, but most are of the 2,000 bu. size or bigger. The tank farms erected vary from a few bins to sizable numbers, according to the amount of old C.C.C. wheat in storage in farm bins in each community. But in few if any cases has a sufficient number of steel bins been erected to satisfy all of the demands of co-operating farmers who want to empty their farm bins.

While Kansas elevator operators interviewed failed to see trucks bringing in the A.A.A. steel bins, being loaded with wheat for return to the corn belt, Iowa elevator operators declared such wheat was brought back.

The Farmers Elevator Co., at Bondurant, Ia., for example, reports return of 2,000 bus. of wheat by such trucks. Forty-nine of the 2800 bus. size bins were shipped west by truck from Bondurant to provide 137,200 bus of storage for wheat, leaving 29 bins at Bondurant. Into one of these remaining bins went the 2,000 bus. of wheat returned; then the wheat was promptly sold by the county A.A.A. committee for feed.

J. E. Hale at Collins, Ia., similarly reports return of wheat to Iowa bins remaining empty by the trucks that carried dismantled tanks west. He also announces sale of the wheat for feed to satisfy hungry Iowa hogs and cattle.

Many Iowa grain elevator operators have been approached by county A.A.A. committees seeking storage room for western wheat. Some have made bins in their elevators available for this purpose; but others have held to the conviction that all of the space they now have available will be in heavy demand for storing corn and soybeans this fall.

The soybean, as one of the plants producing edible seed, dates as far back into antiquity as wheat. Our knowledge of it seems recent only because it took so long for we occidentals to appreciate its merits.

## Washington News

A continuous audit of records of manufacturers operating under P. R. P. was begun July 1 by the W. P. B.

A labor policy committee has been created by Leon Henderson consisting of labor union officials mainly. Employers are not represented.

The allocation symbols required by the W. P. B. on all purchases do not apply to purchasers or repurchasers of grain and other farm products; but only to final processors of farm products.

Washington, D. C.—The W. P. B. July 13 prohibited the manufacture if using steel, of a long list of items for civilian use, such as corn cribs, dust collecting equipment, except on A-1-j or higher, grain storage bins except strapping and reinforcing.

Losses that might be caused by warfare to insured wheat and cotton crops are covered by the Federal Crop Insurance Corporation's insurance contracts. The Corporation has insured more than half a million wheat farms and 170,000 cotton farming units for this year.

The House finally has disposed of the parity wheat sale deadlock by agreeing with the Senate to allow the sale of 125,000,000 bus. of government-owned wheat at 85 per cent of the parity price of corn, or about 83 cents per bushel, for livestock feed and industrial uses.

A revision of the softwood construction lumber freeze order, extending its operation until Aug. 13 to provide sufficient time for development of a system of distribution based on the relative essentiality of lumber for war purposes has been announced by the War Production Board.

The C. C. C. has been authorized by the president to subsidize certain farm products to keep the cost to consumers down to the ceiling set by Leon Henderson. The subsidy, it was understood, would be accomplished by having the Commodity Credit corporation buy farm products at parity or higher prices and resell them at prices consistent with Henderson's price ceiling.

Price ceilings have been removed from services on a farm by the O. P. A. The exemption, however, does not include services performed by a commercial operator off a farm. Thus, grinding or milling of grain, if performed by a commercial operator off a farm cannot be charged for at a rate higher than the highest price charged for the same or a similar service during March, 1942.

Oversize machinery will operate without strain and will therefore do a better job longer than undersized machinery. For example: a 1,500 bu. corn cleaner, following a 1,200 bu. per hour corn sheller will do a better job than a 1,200 bu. cleaner because it will have greater capacity to handle any extra strain put upon it.



Top: 34 steel bins loaded with C.C.C. wheat at Ellsworth, Kan., were filled from farm stored stocks. Bottom: 26 steel bins in course of erection at Dorrance, Kan., were filled with a blower.



## Crop Reports

Reports on the acreage, condition and yield of grain and field seeds are always welcome.

Richland, Mo., July 17.—Oats good, 100 per cent; wheat very poor; barley very poor; soybeans late, 80 per cent crop.—Producers Exchange.

French Lick, Ind., July 15.—The grain in this part of Indiana will run about 50%, and the old grain is gone. What wheat there is is not fit to mill.—The French Lick Milling Co.

Rich Hill, Mo., July 15.—Large acreage of soybeans, several times more than last year; condition, average to good; oats are good; corn looks fair to good.—Peoples Elevtr. Co., H. F. Kienberger, mgr.

East Pleasant Plains, Ia., July 15.—Bean acreage increased about 40% and crop doing fine. Corn acreage increased 10% and beginning to ear. Small grain and hay largest crop for some time.—Henry Rickard & Son.

Gosport, Ind., July 15.—The largest acreage of beans and the best looking prospects ever. Wheat, small acreage and poor quality. Rye, good and average to 10%; more acreage. Corn normal acreage, poor prospect; too much rain.—Brewer Millg. Co.

Ericson (Boone p.o.), Ia., July 15.—Soybeans, 35% increase, condition very good; corn, 10% decrease, condition very good; oats, 20% decrease, condition fair to good; grain sorghums, 5% increase, condition good.—Ericson Co-op. Elevtr. & L. S. Co.

Winnipeg, Man., July 9.—Condition of wheat crop June 13, estimates wheat conditions at 136% of normal as compared to 109% on May 31 this year and only 80% on June 30, 1941, according to the crop report issued by the Dominion Bureau of Statistics.—McCabe Bros. Grain Co., Ltd.

Oxford, Kan., July 16.—We have no beans around here that I know of. Feed and corn crops look good for this time of year. Wheat and barley about all harvested. Crops in general about as last year; wheat is somewhat better quality, but weedy. No crops plowed up that I know of.—H. W. McDaniel, Adamsville Elevator.

Winfield, Kan., July 16.—Acreage of beans is very small. Just a few acres planted for experiment. They look fairly good so far. Wheat yield about 10 to 12 bus. per acre, about same as last year. Oats yield from 30 to 50 bus. and barley 20 to 35 bus., which is about the same as last year. Corn looks good now but we'll soon need rain.—Norton Grain & Feed Co.

Louisville, Ky.—Approximately two inches of rain has fallen each week for the last five in East and Southeast Kentucky areas and weeds are choking some crops. Meteorologist J. L. Kendall said, July 17. In four southeastern counties "crops along the creeks were almost entirely destroyed. In Southwest Kentucky rains have been near normal and all crops are flourishing."—A.W.W.

Helena, Mont., July 14.—Grasshopper outbreaks in south-central Montana are reported with poison being spread in Yellowstone, Big Horn and Carbon Counties. Winter wheat has passed the stage of grasshopper damage, but late crops are still liable to attack. Sugar beet webworms are reported from many sugar beet areas, although damage has been slight to date.—Jay G. Diamond, B.A.E.

Cooksville, Ill., July 15.—Acreage of beans increased about 20% over last year; condition good. Acreage of corn about the same as last year; condition fair to good. Acreage of oats about 10% less than last year. What few have been combined are good weight but not yielding as much as expected; are having too much rain and are down and lots of them lost in combining.—Fletcher Co-op. Grain Co.

Ardmore, Okla., July 16.—Green bugs destroyed all crops of wheat, oats and barley in this section. The growing corn crop is good, but need rain right now very badly. Cotton crop around here is only fair, and is late. Lots of feed crops such as Hegari, Kafir, Sudan, Millet, Cane, etc., planted in this section and such crops are doing fair but are late and needing rains.—Ardmore Milling Co., by T. J. Underwood, pres.

Emerson, Ia., July 15.—Beans were poor last year and do not promise very much this year.—Emerson Grain Co.

Toronto, Ont., July 9.—The crop situation in Ontario, taken as a whole, is considered good this season, but there is greater variation than usual in the appearance of crops. Total production of fall wheat will be much higher than the small crop harvested last year. The acreage was considerably increased and the yield per acre is expected to be excellent in most counties.—S. H. H. Symons, Statistician, Ontario Dept. of Agr.

Oklahoma City, Okla., July 1.—On the basis of reported yields on July 1, the 1942 Oklahoma wheat crop is estimated at 61,792,000 bus. compared with 48,610,000 in 1941, and 47,682,000 the 10-year (1930-39) average. The indicated production of corn is 28,890,000 bus. compared with 31,202,000 in 1941. The production of oats is estimated at 23,910,000 bus. compared with 25,900,000 in 1941. The 1942 barley production is indicated at 10,625,000 bus. compared with 2,091,000 the 10-year average.—Oklahoma Dept. of Agr.

Higginsville, Mo., July 10.—Missouri crops were damaged more by floods this year than they have been for many years. Not only the bottoms along the Missouri River overflowed, but the smaller rivers and creeks overflowed and caused damage to crops and land which is hard to estimate. With already a short wheat acreage, these floods have cut the wheat crop more than a million bushels and Missouri will harvest less than 10 million bushels of wheat.—A. H. Meinershagen, sec'y Missouri Grain & Feed Ass'n.

Madison, Wis., July 13.—Growing conditions for the 1942 rye and winter wheat crops have seldom been equalled in the state. Despite the decrease of nearly eight per cent in the acreage as compared with a year ago, the estimate of the state's rye production this year is 1½ million bushels or four per cent above the crop harvested in 1942. Winter wheat production for this year is estimated to be 11 per cent more than the 1941 crop although the acreage is about five per cent less than the 1941 acreage.—Wisconsin Crop Reporting Service.

Springfield, Ill., July 14.—Illinois crop prospects, excepting winter wheat and winter barley, are up to average or better although conditions are much more spotted than on June 1st as a result of one of the wettest Junes on record. Percentage increases compared with last year are: Corn, 5; soybeans, 40; barley, 20; rye, 5; percentage decreases are: Winter wheat, 41; spring wheat, 9. The acreage of oats is the same as a year ago. The big changes from 1941 acreages are: an increase of nearly 1,100,000 acres to a new high record of 3,840,000 acres of soybeans for all purposes and a drop of 724,000 to 1,041,000 acres of winter wheat—the smallest since 1866.—Illinois Dept. of Agr.

Decatur, Ill., July 18.—Combines were at the job of harvesting the wheat crop during the last day or two. The quality is poor, bleached, light test. Yields naturally are low. Late planting Hessian fly, chinch bugs, rust, wet weather—all are contributing factors to poor quality and yields. Some oats are also being combined. Reports from northern areas show good quality and yields. In central and southern areas the oats are weathered and yields are disappointing, reflecting the continuous wet weather and rust. In many fields oats are dead ripe and almost flat, and loss from shattering has been heavy. The heavy clover and weed growth, caused by heavy rains, is helping to make combining difficult. Growers will keep all the oats they can find room for on the farms as they can be used as feed for growing pigs, of which there are a record number on farms.—Baldwin Elevator Co.

Minneapolis, Minn., July 15.—In the extensive territory covered by this letter, it is inevitable that there should be considerable variation in the condition and probable yield of the various grains, depending upon local conditions. During the past ten days an outbreak of plant diseases has quite seriously reduced the prospective yields and test weights in certain localities, and has impaired the almost universal outlook for bumper crops throughout the territory. Leaf rust of wheat, oats, and especially flax is prevalent in many sections; also blight and scab are injuring many fields of barley in southern Minnesota. With the exception of extreme northern districts, all small grains are headed out and filling properly. In the greater part of the territory wheat is in the soft dough stage. Although damaged in some sections of North Dakota by

the heavy frosts of mid-June, a bumper crop of rye is now practically assured, and harvest has commenced in southern districts. Early sown barley and oats will be ready to cut within a week or ten days. Forcing weather has brought corn, which had a late start, to almost a normal seasonable stage of development.—Van Dusen Harrington Co., by Paul C. Rutherford.

Afton, Okla., July 16.—Beans have been planted for about two weeks, about one-third of them will be plowed up and then corn or oats will be planted for next year. Wheat, barley and oats have already been harvested and sold. The average per acre was from one to three bus. less than last year. Corn looks good and it should be the best corn crop grown in this part of the country in years.—J. M. Fuser, Jr.

Minneapolis, Minn., July 18.—For another week the weather in the Northwest and in northern Iowa has been favorable for the development of the flaxseed crop which is approaching maturity in the southern zone and the flowering stage in the northern zone. Except for showers, the weather has been clear and warm and even hot, but there have been good breezes. This kind of weather is just what we want to keep to a minimum the damage from rust infection, which is especially prevalent in the Red River Valley. You must remember, however, that this rust infection is present and damp weather, especially cool damp weather, from now on would mean much greater damage to the growing crop from this source. Also, our crop observers report that lately the growth of weeds has been very pronounced.—Archer-Daniels-Midland Co.

Topeka, Kan., July 10.—Winter wheat production is estimated at 174,867,000 bus. as of July 1 compared with 173,092,000 bus. produced in 1941 and the 10-year (1930-39) average of 131,460,000 bus. The yield per acre is the highest since 1931 and the production the third largest on record. Hessian fly infestation in fields in eastern Kansas have caused severe losses in yield and the delay in harvest because of rains, resulted in considerable shattering of overripe grain when harvested. The acreage of winter wheat harvested is now placed at 10,598,000 compared with 11,775,000 acres harvested last year. Corn production is estimated at 52,003,000 bus. as of July 1 or a yield of 19.0 bus. per acre on the estimated total harvested acreage for the state at 2,737,000 acres. Corn made fair growth during the month, however, the crop is in all stages of development ranging from fields that have recently been replanted to fields of early varieties that are in tassel. The oats crop is estimated at 43,075,000 bus. and may be compared with 36,428,000 bus. last year. Barley production is estimated at 17,806,000 bus. compared with the record crop of 26,120,000 bus. last year. Production of rye is placed at 1,162,000 bus. this year and may be compared with 979,000 a year earlier while the acreage harvested is placed at 101,000 acres compared with 89,000 in 1941.—H. L. Collins, Sr. Agr. Statistician.

Winchester, Ind., July 18.—We are in the midst of the most dismal failure in the wheat crop that I can remember in over 40 years in the grain business. The little patches of wheat cut with a self-binder and stacked, looked like it was a wonderful crop. Up until 10 days ago we heard no complaint of the wheat crop, only it was thin on the ground. This old-fashioned way of cutting wheat we found wheat that would make 25 bu. to the acre, that's never bad in this country, but the combines are pulling out of the fields because the farmers are not getting enough wheat to pay for their threshing, and the government with its usual liberality is out surveying the farms paying the insurance. Can't help but believe if this wheat had been cut in the old fashioned way at the time it was ready to cut we would have had a fair crop and the government would have saved paying insurance on it. Wet spring put hay harvest, corn cultivating, soybean planting and everything else in a heap and without any change of employing labor farmers thought they just couldn't thresh their wheat. Last year we handled half a million bushels through our little transfer house and if we handle fifty thousand bushels now it is more than we expect. Just terrible; the wheat that is left in the fields is shrivelled and light weight and farmers, sensibly, are putting it up for feed. Many of them blame it onto corn borer.—Goodrich Bros.

The C. C. C. as of July 11 held 201,464,000 bus. of wheat of the 1941 crop and slightly more than 98,000,000 from earlier crops.

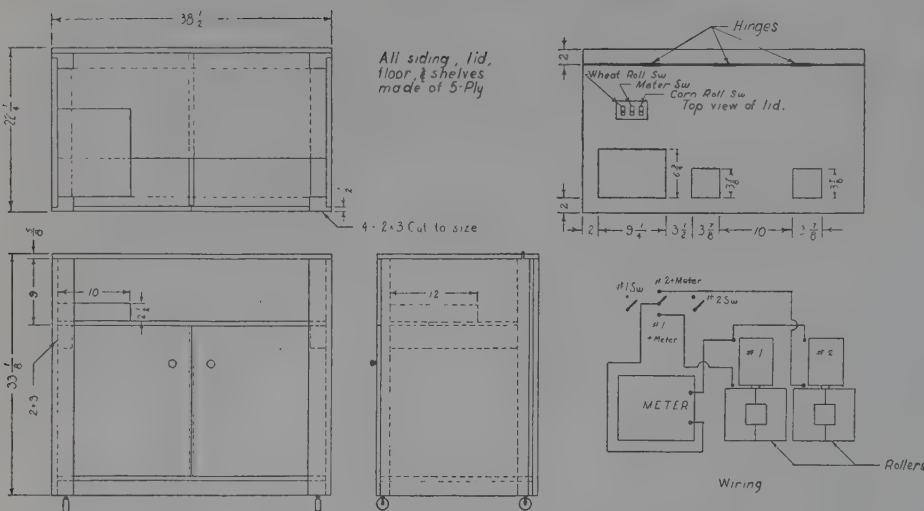


# Grain Movement

Oct. 1, '41 to  
June 30, '42 2,880 10,927 20,239 5,571 2,083  
Cargo and truck receipts converted into car-  
lots on basis of 1,500 bushels equal 1 car.

	Wheat													
	Option		July	July	July	July	July	July	July	July	July	July	July	July
	High	Low	8	9	10	11	13	14	15	16	17	18	20	21
Chicago .....	137½	117½	122¾	123¾	123	122½	122¼	121½	121½	119¾	118¾	117½	118¾	119¾
Winnipeg, October	90	90	90	90	90	90	90	90	90	90	90	90	90	90
Minneapolis .....	131	110¾	116¾	116¾	116½	115¾	115¾	115¾	114¾	112½	110¾	110¾	111	112
Kansas City .....	127¾	109½	114¾	115¾	114¾	113¾	113¾	113¾	113¾	111¾	110¾	110¾	111½	112
Duluth, durum .....	114	107¾	112¾	113¾	112½	112½	112½	112	112	112	110½	108½	108½	108½
Milwaukee .....	137¼	117½	122¾	123¾	123¾	122¼	122¼	122	121¾	120	118½	118	....	....
Corn														
Chicago .....	94¾	84¾	90	90	89¼	89¾	90½	90¾	90½	90	90	89¾	90½	90½
Kansas City .....	88¼	84½	87¾	87¾	86¾	87	87¾	88½	88¾	87½	87½	87¾	88¾	88¾
Milwaukee .....	94¾	84¾	90¾	90	89¾	89¾	90½	90¾	90¾	90¾	90¾	89¾	....	....
Oats														
Chicago .....	60	46¾	48½	49½	48½	48¾	48¾	49½	49¾	49½	47¾	47½	48	48½
Winnipeg, October	51½	46	48¾	48¾	48½	48½	48½	48¾	48¾	46¾	47	47¾	47¾	47¾
Minneapolis .....	53¾	42½	44½	44½	44½	44¾	44¾	44¾	45¼	44¾	43¾	43¾	43¾	43¾
Milwaukee .....	60	46¾	48½	49½	48½	48¾	48¾	49¾	49¾	49½	47¾	47¾	....	....
Rye														
Chicago .....	98	64¾	70¾	71¾	70½	69½	70¾	70	70½	68¾	68¾	67¾	68¾	68¾
Minneapolis .....	87½	60	66¾	66½	65½	65	65½	65¾	66¾	64¾	63¾	63¾	63¾	64
Winnipeg, October	86½	56½	57½	58½	58½	57¾	58	58¾	57¾	56¾	56¾	56¾	56¾	57
Barley														
Minneapolis .....	63¼	53	53½	55¾	54¼	54¼	53¾	53¾	53¾	52½	51	50¾	51½	51½
Winnipeg, October	64¾	56½	62¾	62	61¾	61¾	61¾	61¾	61¾	60¾	61½	61¾	61¾	61¾
Soybeans														
Chicago, October..	203	168½	176	176½	175½	175¼	176½	175½	175½	175½	175½	175½	175½	175½
Canada Exchange ..	....	....	90	90	90	90	90	90¾	90¾	90¾	90¾	90¾	90¾	90¾





Plans for wiring wheat and corn rolls to one moisture meter box

## Moisture Meter Rolls Combined in Cabinet

Wheat and corn rolls of a Tag-Heppenstall moisture meter have been combined in a cabinet and wired thru a single moisture indicating meter by an ingenious electrical hook-up designed by Georgell Douglass, one of the licensed grain inspectors with the Kansas City office of the Kansas Grain Inspection & Weighing Department.

The cabinet, built of 5-ply pine, with 2x3 inch corner posts, is mounted on large rolling casters, so it is readily wheeled to any desired location in the inspection offices. It is in constant use.

The device consists of two separate sets of rolls, with individual motors, and the body of a single meter, all located under a working cabinet top, hinged to the body of the cabinet. This top supports a wood rack to hold the moisture conversion charts in reading position.

Large boxes or cans fit into the lower part of the cabinet to receive separately the grain samples from each pair of rolls after these pass thru the rolls.

E. L. Betton, inspector in charge at the Kansas department's main office, likes the arrangement. He says: "We find it very convenient as we handle our samples something in the order of an assembly line; first, thru the divider, then we check our manifest, the protein is taken from the sample, and so on down the line. There is no stopping to change rolls or machines when we have different grains going down the line at the same time."

The accompanying wiring diagram, prepared by Loren Douglass, explains the wiring hook-up.

**Regulation No. 13** sets up new and uniform rules governing the sale of idle inventories of certain kinds and removes such specified sales from the existing regulations which affect the normal flow of material. Limitation orders, issued by WPB in anticipation of industrial conversion to war production, and to conserve scarce materials, contain various provisions which restricted disposal of inventories frozen as a result of their terms. In some cases, certain permitted types of sale were listed in the original order. In other cases, no sale might be made without application to Washington and the specific authorization of the Director of Industry Operations. These restrictions are now replaced by the conditions established in the new regulation, which controls all sales of restricted material including those sold in liquidation and bankruptcy proceedings.

## A Texas Storage Annex

The Farmers Grain & Implement Co. at Groom, in the Texas Panhandle, managed by C. L. Ledwig, built a simple storage annex to its 25,000 bu. studded elevator, increasing its total storage space to 210,000 bus.

The annex is an 85x140 ft. frame, studded and iron-clad building, connected to the elevator thru spouting, a screw conveyor and a return conveyor belt.

The building rests on a 6 inch reinforced concrete foundation, thru the middle of which runs a 6 ft. deep return conveyor belt tunnel. Spout outlets extend from openings at the inside edges of each of the ten flat-bottomed bins to drain to the 12 inch conveyor belt in the tunnel to return grain to the elevator receiving pit.

The ten bins are all of equal size, each holding approximately 18,000 bus. They are built of 2x6 studding sheathed with shiplap, and cross-tied with 3/4 inch reinforcing rods placed at 5 ft. intervals each way.

Wheeled scoops are used to shovel out the grain from the flat bin bottoms.

Each bin is ventilated thru a novel ventilating louvre projection from the gable roof of the building.

Bins are filled from the leg head in the elevator, thru metal spouting to a 10 inch screw conveyor under the roof ridge of the building. A 10 h.p. motor runs the screw conveyor.

The elevator and this annex are federally licensed for grain storage. The annex is located on the Rock Island railroad.

## Books Received

**PHOSPHATE FERTILIZERS**, their relation to the phosphate-supplying power of the soil and to the requirements of farm crops, is fully covered in a well illustrated pamphlet by E. E. DeTurk and published as Bulletin 484 of the University of Illinois Agricultural Experiment Station, Urbana, Ill.

## From Abroad

To ease demands on shipping, despite good present reserves, the British have radically revised their flour standards and are making darker bread compulsory.

**Managua, Nicaragua.**—The government on July 1 seized large quantities of corn held by speculators at Masaya, who were fined and threatened with jail for a second offense.

**The Argentine** government has reduced the price of flaxseed 5 cents, to \$1.40½ per bushel in store at Buenos Aires. The Grain Board is offering new crop corn for export at 34c per bushel. The export price of wheat to Europe and Brazil is 62½c.

**In Paris** the dearth of foodstuffs is very great and sometimes markets are virtually devoid of supplies entirely. It is said the Nazis have requisitioned nearly all of the livestock. Some of the large towns in unoccupied France are almost on famine rations. Peasants are not delivering their grain surplus, fearing a shortage this year with so many young Frenchmen still held as prisoners of war in Germany that field work must be next to impossible.—Broomhall.

## Auger Hole in Car Floor

When C. & E. I. car No. 479 arrived in Chicago recently it was in apparent good condition; but the deputy weighman of the Chicago Board of Trade, Roman L. Salik, noticed a depression in the grain midway between the door and the end of the car and about 30 inches from the side of the car. The height of the grain was about 60 inches.

After the car was emptied and swept clean a plug was found closing a hole that had been bored upward in the floor 2 inches in diameter. To make the plug the end of a Georgia pine plank had been sawed off square by a good saw in the hands of an experienced mechanic.

Both seals on the car, C. & E. I. 39175 and 134179, were intact. The lowest point of grain at the place of the plug was 40 inches. The area of removed grain funneled in from the end of the car, side of car and the doorway from about 60 to 40 inches.



25,000 bu. elevator of Farmers Grain &amp; Implement Co., Groom, Tex., has 185,000 bu. flat-bottom annex



## New Oats for Pigs

By E. L. QUAIFE, Iowa State College

New oats can well be fed to hogs, particularly to late farrowed pigs that would normally be marketed in December and January.

It now appears that there will be a good oat crop and that prices will be favorable for hog feeding.

Hogs which are being forced to market early should not receive more than one-fourth oats in the ration. The corn and oats can be ground and self-fed or the whole oats may be placed in separate feeders.

Late farrowed pigs may be fed one-half oats or even more. If the oats are to be fed dry they should be ground with the corn, using one-half oats and one-half corn, or if circumstances warrant, three-fourths oats and one-fourth corn.

If the entire ration is to be made up of oats, they should be ground to a medium degree of fineness, soaked 12 hours and fed as a thick mash or slop. Pigs should be weighing 75 to 100 pounds to do well on a diet made up entirely of oats.

Brood sows will do well on whole oats and pasture. If they are badly suckled down however, they should receive an ear of corn a day to bring them up in flesh. During the last month of pregnancy it is advisable to feed one-fourth pound of protein supplement daily.

The dairy cow is a complex but very desirable mechanism for performing certain important chemical functions. Study and care in the fuel supplied will materially improve both the quality and quantity of the output.

## Open Interest in Future Deliveries

As reported by C.E.A. the open interest in all futures on the Chicago Board of Trade recently has been as follows, in 1,000 bus.:

	Wheat	Corn	Oats	Rye	Soy beans
Oct. 4	57,679	40,353	18,873	20,815	10,974
Nov. 1	52,584	41,844	16,985	20,480	9,584
Dec. 6	49,231	42,915	14,059	15,301	9,012
Jan. 3	38,347	46,892	12,184	19,819	6,921
Jan. 10	35,946	49,912	12,575	21,272	6,733
Jan. 17	34,824	55,212	12,453	23,268	6,406
Jan. 24	36,400	61,696	12,853	24,887	6,525
Jan. 31	35,395	65,190	12,269	26,702	6,889
Feb. 7	34,643	65,459	11,977	27,667	6,886
Feb. 14	34,742	65,726	12,346	27,257	6,872
Feb. 21	34,255	65,673	12,436	27,353	7,100
Feb. 28	34,087	66,928	12,393	28,604	7,195
Mar. 7	35,587	67,631	12,582	29,186	7,479
Mar. 14	34,824	67,530	12,621	29,381	7,260
Mar. 21	35,602	66,905	12,134	29,495	6,880
Mar. 28	36,090	65,597	12,209	29,548	6,852
Apr. 4	36,133	71,513	12,202	29,429	7,060
Apr. 11	36,339	73,144	12,616	28,901	6,960
Apr. 18	35,564	71,031	12,674	27,683	6,697
Apr. 25	34,666	71,425	11,957	27,364	6,267
May 2	31,910	67,461	10,758	26,692	5,491
May 9	32,799	68,505	9,697	26,107	5,332
May 16	32,820	67,204	9,413	26,007	5,225
May 23	33,670	65,253	8,191	25,548	4,974
May 29	35,050	65,321	8,553	26,178	4,867
June 6	33,511	62,863	7,938	24,914	4,445
June 13	33,305	62,331	8,076	24,122	4,319
June 20	33,693	61,011	8,397	24,230	4,050
June 27	34,253	58,196	8,689	24,097	3,710
July 3	33,089	56,552	8,865	23,309	2,939
July 11	37,641	56,455	9,371	23,459	2,254
July 18	44,260	56,497	9,221	23,657	2,133

## How Grain Dealers Build Farm Bins

The Denniston & Partridge Co., operating a number of elevators and lumber yards in Iowa, has designed hog houses which can double as grain storage bins.

A three-pen hog house will hold between 500 and 600 bus. of grain. It is 7 ft. wide, 18 ft. long, 7 ft. high at the high point of the sloping roof, 4 ft. high at the low point. The houses are built with a strong frame of 2x4s, floored with rough cypress, covered with red cedar tongue and groove car siding, and have metal or tar paper roofs.

The one William Tack at Perry showed us had hinged ventilators at the back, sliding windows at the front, two removable divider walls inside to make three bins, and the customary doors found in hog houses. The houses are mounted on skids so they can be dragged by tractor to suitable locations on farms. The sliding windows are high enough so that the houses can be shoveled full of grain conveniently when the doors are boarded up to hold grain.

These houses commanded a price of \$115 each, or a little more than 20c per bu. But they can be used alternately for grain storage, and for housing hogs with proper cleaning, of course, between the two forms of occupancy.

The double purpose of this type of construction offers distinct advantages to the farmer over the wood tanks A.A.A. is offering farmers for wheat storage in many sections of the wheat belt.

MAX CRAMER of the Citizens Lumber & Supply Co. in Chester reports selling and building 16 farm grain bins of the 500 and 1,000 bu. sizes to farmers of that area. These practical buildings are built with 8 ft. high, 2x6 inch studs, covered with tongue-and-groove siding, and roofed with shingles. Corners are protected with metal. One door is fitted up under the ridge of the roof, thru which the bin may be filled with a blower or farm elevator. Another door is fitted in a side to cover the customary sloping type of grain retainer pieces.

The 8x12 ft. size holds 500 bus. of wheat; the 10x16 ft. size holds 1,000 bus. Both sizes are mounted on skids so they can be dragged with a tractor to new locations on the farm as needed.

The 500 bu. size sells for \$126.40; the 1,000 bu. size for \$178, which makes the cost to the farmer of the larger size just under 18c per bu.

"Trouble now," says Mr. Cramer, "is to get carpenters to build these bins. Carpenters can get high wages in defense work. We've lost three of our carpenters that way."

A feature of the Cramer-built farm grain storage bins is that they are substantial buildings which may be converted to a number of other farm uses when farm storage of grain is no longer a necessity.

Grain dealers, like farmers, cannot reap what they do not sow. If their business methods breed confidence, and if they are alert to the needs of their communities, they will be rewarded with trade.



Top: Max Cramer, Citizens Grain & Supply Co., Chester, Neb., at door of 500 bu. farm grain bin. Middle: Manager William Tack, of Denniston & Partridge Co., Perry, Ia., with 3-pen hog house convertible to grain storage. Bottom: A prefabricated grain bin built by Western Silo Co. for Commodity Credit Corp. to store wheat.

## Steel Tanks for Added Storage Space

Homer Humphreys expanded the storage space available at his 10,000 bu. elevator on the Rock Island railroad at Holton, Kan., by adding 33,000 bus. of space in 10 steel grain tanks, each of which holds 3,300 bus. The tanks are the large size farm storage type, prefabricated of corrugated sheet steel, and bolted together.

The tanks rest on gravel and sand foundations held by reinforced concrete retainer rings. They are set in a double row. Filling them with grain is a mechanical operation. A 12 inch screw conveyor extends horizontally from the bin floor of the elevator, over the tanks. Spout take-offs from the screw conveyor direct grain thru the roofs into the tanks.

Emptying the tanks is similarly mechanical. A 12 inch screw conveyor between the tanks draws grain back to the elevator. Most of the grain empties into the screw conveyor by gravity. Only grain at the bottoms must be scooped into the conveyor box.

Each of the screw conveyors is run by a 7½ h.p. Fairbanks-Morse inclosed motor, thru a Falk gear reduction head.

The tanks were erected at a cost of 17½c per bu. of storage space, according to Louis Carnahan, the elevator manager, and Ed Ernest, the builder.

Nature expresses the value of ass'n and of teamwork for the benefit of all. Rivers grow from many small rivulets and tributaries.



Homer Humphreys has 33,000 bus. storage space in 10 steel bins connected to elevator at Holton, Kan.



## Cooperation from the U. P. R.R.

W. P. Atherton, who operates the 39,000-bu. steel tank elevator of the Fose Grain Co. on the Union Pacific railroad at Russell, Kan., has a complaint against the Union Pacific railroad.

This is because the Union Pacific has failed to cooperate with him in a storage expansion project which would aid farmers in the Russell trade territory to the extent of making available 15,000 bus. more storage space than is now available.

Mr. Atherton's elevator sets on leased land which is a part of the railroad's right-of-way. Close to the elevator on the driveway side, which is the side opposite from the railroad's switch track, is the seven-wire local signal system of the railroad, strung up on poles after the customary manner of telephone wires. These wires are the point of contention. They pass too close to the elevator to permit Mr. Atherton to erect three steel tanks, which he has bought and has on hand, in the position in which they should be erected for economical use, without expensive expenditure for conveying machinery which is now available only on priority, and largely forestalled by the nation's war effort.

The tanks, each of which is 16 ft. in diameter, and each of which will hold 5,000 bus. of wheat, must be erected on the side of the elevator where the wires pass, so that they may be filled thru spouts from the elevator cupola, and emptied thru spouts draining into the driveway pit.

Mr. Atherton bought the tanks on the assurance of the local agent for the Union Pacific railroad that there would be no difficulty over having the signal wires moved.

But after Mr. Atherton had the tanks and carried his request for moving of the wires to the general superintendent of the line of the Union Pacific on which he is located, he got no "yes" and he got no "no." He got nothing. He offered to get the city electrician and move the wires at his own expense. He still got nothing. He proposed that the wires be raised high enough to permit him to erect the tanks, or that the wires be attached to cross-arms extended from the tanks when they are erected. All he asked was railroad permission to move the wires enough to permit him to erect



U. P. signal wires prevent W. P. Atherton from adding storage at Russell, Kan.

the tanks. But he has been given no permission.

This seems to Mr. Atherton to be a decidedly non-cooperative spirit on the part of the railroad, especially in view of the fact that his community needs the storage space, his elevator pays the railroad several thousands of dollars in freight charges every year, and the freight on the 15,000 bus. of wheat he would be able to store in the tanks would be many times more than the cost to the railroad of moving the wires.

If the wheat is stored in his plant the railroad will eventually get the freight haul, but if it stays out on farms, or must be piled on

the ground, a sizable portion of that 15,000 bus. is apt to spoil, and never be shipped. It would seem that Mr. Atherton deserves more than a non-committal answer from the railroad's general superintendent.

The selective service has been given new instructions on deferment by the Man Power Commission. Men engaged in the manufacture of grain mill products, animal and poultry feed, grist milling, corn shelling and grain cleaning are held to be in the list of 34 essential activities; but deferment is individual, because of the shortage of persons with his skill in the activity.

## Howard Smith Tests Temperature of Bins

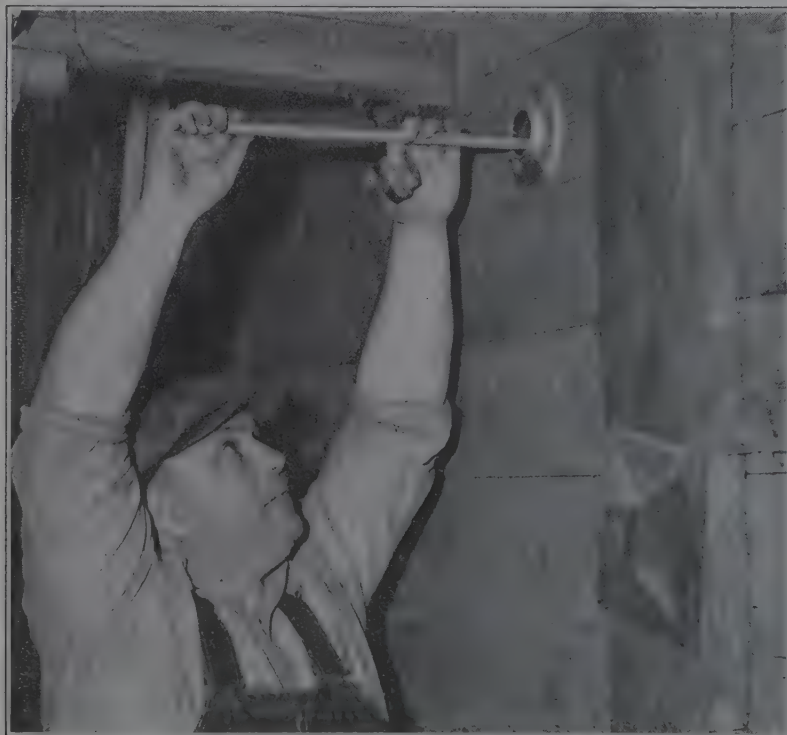
More and more grain elevator operators are coming to recognize the advantage of watching the condition of grain in their bins. Howard Smith, manager of the Walnut Grain Co., at Walnut, Ill., has in use a simple method for checking the temperature of grain in the bins of his cribbed, iron-clad elevator, and he uses it to determine the condition of grain at certain points in his bins.

The device is an entrance to the bin thru which he can thrust a thermometer screwed on the end of a length of  $\frac{1}{2}$ -inch gas pipe, after the manner of a probe.

First a 2-inch hole is augured thru the cribbing at the desired point near the bottom of the bin. Thru this is thrust a 6- or 8-inch length of 2-inch gas pipe, previously welded to a 2-inch flange to keep it from passing on into the bin. The pipe should extend 2 inches inside the bin wall. The flange is attached to the outside bin wall permanently with wood screws. A plug screws into the exposed flange to close it weather tight. A hole passes thru the collar and the plug so the opening can be sealed with a wire seal.

Testing the temperature of grain in a bin so fitted consists only of unscrewing the plug and thrusting a probe-encased thermometer into the bin the proper distances to take readings at the middle and near the outside.

Several bin thermometer entrances, ranged up the side of the bin makes frequent checking of bin temperatures convenient.



Howard Smith of Walnut Grain Co. tests temperature of stored grain



# Grain and Feed Trade News

Reports of new elevators, feed mills, improvements; changes in firms; fires, casualties, accidents and deaths are solicited.

## ARKANSAS

Cotton Plant, Ark.—The Arkansas Farmers & Tenants Co-op. Ass'n, Inc., has applied for a charter to operate a co-operative ass'n dealing in agricultural products. Under the regulations of the charter the ass'n would be able to handle production, processing and marketing of all agricultural products among other things. Headquarters of the ass'n will be here.—P.J.P.

## CALIFORNIA

Woodland, Cal.—Construction has started on a \$15,000 rice and grain drier of the Hedrick Bros. farm. The drier will have a capacity of 12,000 sacks.—F. K. H.

Lincoln, Cal.—The eight-bin elevator of Walter Jansen & Son has been completed and placed in operation. Construction had been delayed because of priorities and difficulties in procuring material.

Fresno, Cal.—California's wine industry has agreed to turn over part of its copper still equipment for use in Middle Western and Eastern grain distilleries. The action was taken to meet a War Production Board request for 25 or 30 of the big copper rectifying columns.

San Francisco, Cal.—David L. McDaniel, 55, prominent grain and mill feed merchant, died in Vancouver, Wash., May 30, while on a business trip. He was president of the Merchants Exchange Club, the Grain Exchange. Mr. McDaniel was elected president while on his trip.—F. K. H.

Ducor, Cal.—Henry Owen & Sons have completed a bulk grain elevator on the Southern Pacific right-of-way north of here. A side track is under construction to the elevator. The elevator is built of 2x4s, 54x12 ft., 38 ft. high, capacity, 10,100 bus. The structure is divided into five bins, with modern handling equipment installed.

## CANADA

Dundas, Ont.—The Kerr Milling Co. plant has been leased by Henri Godbout, Montreal, who is putting it back into operation.

Winnipeg, Man.—Lew Hutchinson, director and immediate past president of the Alberta Wheat Pool, has been elected chairman of the Wheat advisory com'tee to the Canadian Wheat Board. He succeeds D. G. McKenzie, chairman of the Board of Grain Commissioners for Canada who was recently appointed to that position.

Winnipeg, Man.—James D. Fraser, 67 formerly chief grain inspector for Canada with the Board of Grain Commissioners, died July 11. He retired from service on Nov. 1, 1940, when he had been with the grain inspection department for more than 40 years. He was chief inspector for the Dominion from 1925 until he reached the retirement age of 65.

Winnipeg, Man.—It has been decided to confine future shipments of dry wheat to stations which do not have space for 10 bus. per basic acre, 1941 wheat acreage, in order to create space for a uniform quota at all country elevator stations in western Canada before harvest of the coming crop, according to information contained in Canadian Wheat Board instructions to the trade. The railroads have been supplied with a list of stations which should not receive further cars for loading dry wheat, and copies of the list were also distributed to all elevator organizations.

## COLORADO

Brush, Colo.—The Farmers Elevator has installed a new 30-ton Fairbanks Scale.

## ILLINOIS

Bruce, Ill.—The Sullivan Grain Co. sustained a small loss from high winds recently.

Flanagan, Ill.—The Farmers Grain & Coal Co. has completed a coal shed at its elevator.

Brighton, Ill.—The Wells Elevator has been made an approved custom mixing station, Purina Mills has advised Mr. Wells.

Hardin, Ill.—Manning & Manning of Jerseyville has purchased the feed store owned by E. C. Baker and are operating the business.

Clarion, Ill.—The C. E. Gallagher elevator has been equipped with a new Kewanee Truck Lift, and work is under way to install motor power.

Wing, Ill.—Homer Gibb, 58, manager of the Farmers Elevator, owned and operated by Koehler Bros., Chatsworth, died recently.

Stanford, Ill.—W. C. Murphy is new manager of the Stanford Grain Co. elevator, succeeding Stanley Springer who recently enlisted in the Naval Reserve Corps.

Mt. Pulaski, Ill.—Farmers Grain & Elevator Co. has installed a new 20-ton Soweigh Scale with 24x9 ft. wood deck. Weights are printed on the Type Recording Beam.

Tuscola, Ill.—James L. Bush, a member of the Chicago Board of Trade and head of the Bush Grain Brokerage Co., was stricken with a cerebral hemorrhage June 28.

Agnew, (Sterling p. o.), Ill.—The driveway of Habben Bros. elevator has been improved by raising the bottom of one overhead bin to provide more clearance for operation of the truck lift.

Tremont, Ill.—The Co-operative Grain Co. requested firemen to inspect its buildings as regarding fire hazards recently. After the inspection trip, the company served the fire fighters lunch.

Gilman, Ill.—L. M. Walker, local grain man, who has been confined to his home for some time, suffering from an infection in both knees which made it impossible for him to walk, is improving in health.

Sterling, Ill.—The Moses Dillon Co. lumber yard, which burned recently, will not be rebuilt for the present because of priorities, but the company will continue with its coal and builders supply business, having moved its main office to its elevator.

Bartonville, Ill.—Fire on the second floor in the bag room at the Allied Mills, Inc., plant recently did considerable damage. Water leaking on bags of feed stored in the first floor of the plant added to the loss, G. R. Baumbach, plant manager stated.

Belleville, Ill.—J. L. Grigg, veteran miller of Sparta, was re-elected sec'y of the Southern Millers Ass'n for his 42nd consecutive term at the recent annual meeting of the organization at the Clair Country Club near here. C. A. Carter of Ava was elected president.

McLean, Ill.—Ben H. Stubblefield resumed his grain and feed business July 1. The Federal-North Iowa Grain Co., which had operated the elevator and mill under lease for the past year, closed out its interest when its lease expired and he immediately took over active charge of the business.

Peru, Ill.—The Schwab Grain Co. has opened its new elevator, located 3½ miles northwest, on the "plank road" on the LaSalle and Buro County railroad, formerly occupied by the Farrell elevator which was razed to make room for the new structure. Albert Schwab, Route 2, Peru, is manager of the 8,000-bu. house, which was constructed for the convenience of farmers of the "north side" and will handle corn, wheat, oats and other grain as well as beans. George Saathoff was the contractor.

Herbert (Kingston p. o.), Ill.—The proposed abandonment of 28 miles of track by the Chicago & North Western Railroad between Sycamore and Caledonia, Ill., would leave the Alfred Fowler elevator without benefit of railroad. Situated along the right-of-way of this branch of the C. & N. W. Railroad, between Sycamore and Caledonia, besides Herbert and Henrietta (Kingston p. o.), is Belvidere, county seat of Boone County, with the Belvidere Farmers Co-op. Elevtr. Co. elevator located there. This is a junction point of the C. & N. W. R. R. branch running from Wheaton to Freeport and the trackage that the company seeks to abandon. The railroad company has filed suit in federal District court to restrain the Illinois Commerce Commission, the attorney general, states attorneys of Cook, Boone and DeKalb Counties and two members of the Belvidere Chamber of Commerce from interfering with the proposed abandonment, which was authorized by the Interstate Commerce Commission last December on grounds that the government needed the rails and ties for lines to new army camps. The Illinois Commission ruled in February that public convenience required continued operation of the line.

## CHICAGO NOTES

Joseph J. Rice, a partner of Daniel F. Rice & Co., grain commission firm, and former state director of finance, July 21, was appointed a member of the advisory council of the Chicago loan agency of the Reconstruction Finance Corp.

The regular monthly meetings of the Chicago Chapter, Society of Grain Elevator Superintendents, will be resumed the second Tuesday in September. Beginning with this meeting work will start on the formulating of an interesting program for the annual convention of the Society to be held here in April.

## Beware!

Notwithstanding we have frequently warned our readers of the sharp practices of unauthorized subscription solicitors, a number of swindlers using different names, but having no certificate of authority from us, continue to collect money for the Journals without ever being in our employ or having authority to represent us in any capacity. Calling on grain dealers, they always know that your subscription has expired and urge an immediate renewal for a long term. Your bank should credit your account with all forged checks and return them to the agency presenting them for payment. Any information which will assist in stopping the swindling practices of these sharpers will be most gratefully received.

## Grain & Feed Journals

CONSOLIDATED

CHARLES S. CLARK, Mgr.



Jacob Kraft, 71, for many years in the grain and feed business here and formerly president of the Lake View Business Men's Ass'n, died July 11 in Van Nuys, Cal.

C. W. Chapin, who has operated the Chapin Feed Co. for the past 10 years, has merged his company with the Central Feed Supply Co., effective July 15. Offices will be at 327 So. La Salle St., and all trades will be under the name of the Central Feed Supply Co.

## INDIANA

North Liberty, Ind.—The C. G. Wolf elevator has installed a new 25-ton scale.

Raber, Ind.—The Raber Co-op Co. recently installed a Steinlite Moisture Meter at its elevator.

South Whitley, Ind.—The Farmers Elvtr. Co. has increased its common stock to 1,000 shares of \$25 par value.

Kewanna, Ind.—The Standard Elvtr. Co. has installed a 1½-ton capacity Kelly Duplex Vertical Feed Mixer with motor drive.

Clymers (Logansport p. o.), Ind.—The Hirsch Grain Co. recently installed a Steinlite Moisture Meter at its elevator.

Bluffton, Ind.—The Hoosier Grain & Supply recently installed a ton mixer with motor drive, bought from The Sidney Grain Machry. Co.

Worthington, Ind.—Charles A. Meyers, 60, lifelong resident here where he formerly was associated with his father in the elevator business, died July 12.—P. J. P.

London, Ind.—V. G. Moser, who recently resigned as assistant county agent, is operating the former Delaware Feed & Seed Store which he purchased from the Indiana Flour & Feed Co.

Greenwood, Ind.—Herman Mitchell has been appointed manager of the Greenwood Grain Co., to succeed the late John Hunt of Franklin. Mr. Mitchell, recently employed at a hardware store, formerly worked at the Trafalgar Grain Co.

Ft. Wayne, Ind.—The Central Soya Co. has leased the entire west wing of the fourth floor of the Old-First National Bank building, to accommodate a planned expansion of its offices and those of its subsidiary, the McMillen Feed Mills.

Waveland, Ind.—The grain elevator of Newton Busenbark of Crawfordsville together with the feed mill and warehouse burned recently. The loss was estimated at \$20,000. Mr. Busenbark also operates elevators at Lapland, Maplewood, Jamestown and Crawfordsville.

Indianapolis, Ind.—New members recently enrolled by the Indiana Grain Dealers Ass'n include the following: Richmond Milling Co., Richmond; Stambaugh Farm Equip. Co., Crown Point; Lyons Grain Co., Inc., Lyons; Sandborn Elvtr., Sandborn; Worthington Grain Co., Worthington; H. J. Sterrenberg Grain Co., Crescent City, Ill.; Guy M. Wells, Knox; Northern Ind. Co-op. Ass'n, Mentone; R. E. Hays, Campbellsburg; Stewart Grain Co., Williamsport.—Fred K. Sale, sec'y.

Millgrove, Ind.—The Blackford County Farm Buro Co-operative has purchased the Millgrove Elevator, operated for the past fourteen years by Chas. and Wm. A. Brown. Possession was taken July 1. William Wilson will operate the mill, which will be under the management of Warren Langdon, manager of the Farm Buro Co-operative. Improvements may be added later, but for the present the elevator will be operated as in the past, providing elevator, grinding and shipping service for grain products, and sale of general farm supplies and feed.

Portland, Ind.—The Haynes Milling Co. has installed a Kelly Duplex Chain Drag.

## IOWA

LeGrand, Ia.—The LeGrand Elvtr. Co. has installed a new 20-ton scale.

Midvale, Ia.—The Midvale Grain Co. is changing to Midvale Co-op. Grain Co.

Peterson, Ia.—The Farmers Elevator reported a net profit for 1941 business of \$18,669.92.

Plainfield, Ia.—J. Roach Sons, Inc., recently installed a 1-ton capacity Kelly Duplex Vertical Feed Mixer with motor drive.

Dysart, Ia.—R. V. Lee is building a 20x30 ft. feed mixing house just north of his elevator, to house a one-ton feed mixer.

Winthrop, Ia.—Lawrence Keegan, an employee of the Winthrop Elvtr. Co., and Miss Dorothy Gaffney were married June 29.

Rodney, Ia.—Marion Nickolisen recently purchased the Swanson Grain Co. elevator which he is operating as the Rodney Elvtr. Co.

Mitchellville, Ia.—Charles Craig is expanding his feed business facilities by installation of a feed mixer and construction of an 18x24 ft. feed room.

Creston, Ia.—The Union County Purchasing & Marketing Co-operative has filed for incorporation. Carl T. Wilson is company president.—P. J. P.

Jefferson, Ia.—The D. Milligan Co. has installed a new 20-ton 24x10 ft. Soweigh Motor Truck Scale with wood deck and Grain Beam equipment.

Rock Valley, Ia.—The Farmers Elvtr. Co. reported 1941 gross business as \$977,895.67; net profits, \$34,824.29. Owen Manning was re-elected manager.

Titonka, Ia.—Earl Ferguson has succeeded J. L. Miller as manager of Federal-North Iowa Grain Co. elevator. Mr. Ferguson had been manager of the company's business at Denhart for some time.

Ocheyedan, Ia.—The Co-operative Elvtr. Ass'n re-elected E. T. Wellhausen manager at its recent annual meeting; all other officers also were re-elected. The gross sales for the year were \$310,071.60; the net profit, \$14,300.40.

Hobarton, Ia.—The Farmers Co-op. Elvtr. Co. re-elected Raymond Reid as manager at the recent annual meeting. Among late improvements made at the elevator is installation of a new dump and a long wheel-base truck hoist. The wagon hoist was retained.

Des Moines, Ia.—Mark G. Thornburg, state sec'y of agriculture, has recommended to the state industrial and defense commission that priorities for construction of additional plants at Sioux City and Storm Lake, Ia., be granted for the processing of soybeans.

Everly, Ia.—The Hunting Elevator is being remodeled; the driveway is being widened and rebuilt, a new dump is being installed and a small warehouse will be built for the feed business. Original plans were to build an elevator, but due to war conditions it became impossible to do so.

Newell, Ia.—Roy Adams of the Adams Feed Store entertained his customers and all visitors at his store on July 15 with free coffee and ice cream, celebrating the removal of his business to new quarters in the Harvey Building. Mr. Adams carries a large line of feed besides his own mixed feeds.

Red Oak, Ia.—The Dannen Grain & Milling Co. of St. Joseph, Mo., has purchased the Replogle Mill. The 100,000 bus. storage bins are being thoroughly cleaned and reconditioned to be ready for wheat storage. The mill will not be operated for flour milling at present, Dwight L. Dannen stated. The mill has been idle for the past year.

Eldora, Ia.—The Froning Grain Co. elevator, being built to replace the one that collapsed June 5, will be 26x34 ft., 50 ft. high, of frame construction with steel exterior and roof, with 10,000 bus. capacity, Merle Froning, mgr., stated. When government permission is available it is planned to build a 20x32 ft., 34 ft. high annex.

## KANSAS

Hays, Kan.—The Salina Terminal Elvtr. Co. recently sustained a small loss at its plant from high winds.

Wilson, Kan.—Arthur G. Soukup recently reported a small loss sustained at his plant from high winds.

Weskan, Kan.—The Salina Terminal Elvtr. Co. elevator was slightly damaged by recent high winds.

Oronoke, Kan.—The George D. Tubbs elevator was damaged by recent high winds. The loss was small.

Hutchinson, Kan.—The Western Terminal Elvtr. Co. recently installed a Steinlite Moisture Meter at its elevator.

Bennington, Kan.—A. J. Leister of Bavaria is the new manager of the local Shellabarger Mill & Elvtr. Co. elevator, replacing H. A. Waite who will continue with his jewelry work.

Marion, Kan.—A unit of the W. J. Small Co., operators of alfalfa dehydrating plants, will be built here. The plant will be located north of the E. M. Popp place, with a switch on the Rock Island.

Little River, Kan.—The Burke Grain Co. plans to build another large trench bin to hold wheat as soon as the present 235,000-bu. trench bin is completed. (The trench bin under construction was described on pages 18-19 of the July 8 number of *Grain & Feed Journals*).—Will H. Clevenger.

Trousdale, Kan.—John Mayhew and Earl Parker have purchased the Geo. E. Gano Grain Corp. elevator. When the Wichita Northwestern railway line between Pratt and Kinsley was torn up some time ago, and abandoned, it left the elevator ten miles off a railroad, the nearest line being north of here at Belpre. The new owners are farmers and will make use of the elevator for storage of wheat.

Norton, Kan.—The Ralph Reich grain elevator has increased its storage capacity almost three times its former capacity by the addition of new bins and the use of the old W. J. Bower building formerly occupied by the Alley Transfer. New storage capacity amounts to 26,200 bus., which includes 12,000-bu. silo-type wooden tank and two metal bins of 2,700 and 1,500 bus. capacities. The old warehouse will hold about 10,000 bus., giving the elevator a total rated capacity of 37,000 bus.

## KENTUCKY

Louisville, Ky.—Production of sheep could become a \$30,000,000 business in Kentucky within the next few years, the Kiwanis Club was told in a talk by J. Dan Baldwin, head of the Division of Markets for the Kentucky Department of Agriculture.—A. W. W.

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Lexington, Ky.—The Lexington Roller Mills has installed a 1½-ton capacity Kelly Duplex Vertical Feed Mixer with motor drive.

Henderson, Ky.—G. W. Allen, manager of the Ohio Valley Soybean Co-op. Ass'n's local plant, recently took induction examinations in the army.

Bowling Green, Ky.—The body of M. C. Raymer, 40, feed store operator, on July 9 was found hanging in a barn on his farm near here.—A. W. W.

Grove Center, Ky.—The Conway & Omer elevator owned by Hugh Conway and R. R. Omer, and its contents of approximately 6,000 bus. of corn, burned recently.

Louisville, Ky.—J. B. Wathen, Sr., 62, member of one of the oldest and best known distilling families of Kentucky, died July 14, after an illness of eight months.—A. W. W.

Louisville, Ky.—Louisville's grain storage facilities for federal loan grain was termed adequate July 17 by Rees H. Dickson, state chairman of the Grain Permit Com'tee, which has been in session two days attempting to locate enough storage space for the crops.—A. W. W.

Lancaster, Ky.—W. A. Palmer recently filed suit in Garrard Circuit Court against J. R. Myers, and R. H. Myers, doing business as the Lancaster Milling Co., for \$262.50 claimed due him on wheat stored with the milling concern. He alleged in a petition that he delivered approximately 208 bus. of wheat to the mill last July, reserving the right to sell it to the milling company at his discretion. He alleged that in February, 1942, he called for the wheat which the defendants had moved from its storing place and which they refused to deliver.

Frankfort, Ky.—A suit to recover \$3,450 paid under the 1940 state chain store tax law was filed in Franklin Circuit Court July 7 by S. A. Glass, Lexington, operator of 23 retail groceries in Kentucky. The suit charged the law is discriminatory, unconstitutional and retroactive. The law became effective about mid-1940, but provided that taxes could be collected on receipts starting Jan. 1, 1940. Thirty chain store operations in the state filed a similar suit here June 2, contending the law was unconstitutional and demanding recovery of paid taxes.

## LOUISIANA

New Orleans, La.—The New Orleans public elevator beginning July 1 is assessing a charge of 1/10c per sack per month on all sacks stored at the elevator in excess of 15 days. The charge for cooping cars to be loaded with flax (lining floors and walls with heavy paper) is \$2.50 per car; installing grain doors (to be furnished by carrier), 50c per car.

## MARYLAND

Gaithersburg, Md.—The feed mill, warehouses and bins of Herbert Bryant, Inc., were heavily damaged by fire on July 6.

Baltimore, Md.—Henry A. Lederer, 77, a prominent figure in the grain business here for more than 50 years, died July 9 at his home after an illness of several days. He, with his brother, the late Lewis Lederer, formed the firm of Lederer Bros. in 1890. Two sons, who survive with his widow, are Henry A. Lederer, Jr., and Lewis G. Lederer, both members of the firm of Lederer Bros.

## MICHIGAN

Augusta, Mich.—Elevator operators met here recently where the problems of storage, sale and movement of the new crop were subjects discussed at length and a solution sought for means to store the crop.

Jeddo, Mich.—The Farmers Elvtr. Co. reported a small amount of damage done at its plant by high winds recently.

Harbor Beach, Mich.—The Huron Milling Co.'s Employee's Day was celebrated with a picnic at North Park July 18.

Carson City, Mich.—The Rockafellow Grain & Seed Co. elevator was damaged by recent high winds. The loss was small.

Augusta, Mich.—Six new 80-ft. concrete bins that are nearing completion at the Knappen Milling Co. grain elevator will give the elevator more than 200,000 bus. additional storage facilities.

Sault Ste. Marie, Mich.—The MacInnis Feed Store was destroyed by fire recently. Mr. MacInnis will start construction of his new feed mill and store at once, in the meantime conducting business in a warehouse room next door to the county welfare building.

Deckerville, Mich.—William Bearss of Bearss Bros., and Ward Wightman, mgr. of the local branch of the Michigan Bean Co., recently announced that both elevators would close each Thursday afternoon during July, until wheat harvest begins, when they will be open again all day.

Hudson, Mich.—Fire caused from a spark damaged machinery and building of the Gates Alfalfa Mill southwest of here early July 12. The mill was operating on a 24-hr. schedule. Firemen saved machinery on the first floor and a large storage building nearby. Harry D. Gates stated very little meal was stored in the building.

Williamston, Mich.—The Asa Strait & Son Alfalfa Milling Co. has the mill in operation while repairs are being made, necessitated by the fire that recently badly damaged the plant. The frame, outer structure and roof of the building remained standing after the fire, and while charred, are reported in sound condition. The milling machinery was not badly damaged, the water power equipment being in the worst condition.

## MINNESOTA

Benson, Minn.—Howard Lang has purchased the Kellogg Commission Co. Elevator.

Twin Valley, Minn.—The Twin Valley Co-op Elevator has installed a Sidney Corn Crusher.

Fosston, Minn.—Slipping belts caused a small fire loss in the Fosston Co-operative Elvtr. Ass'n. plant recently.

Clearbrook, Minn.—B. A. Stay was re-elected manager of the Clearbrook Elvtr. Ass'n at the recent annual meeting.

Wanamingo, Minn.—The Farmers Elvtr. Co. reported 1941 business volume was over \$400,000. A 10 per cent dividend was paid.

St. James, Minn.—E. W. Schroeder, manager for Hubbard & Palmer Co., was named county chairman of the elevator operators at a meeting held here.

Sacred Heart, Minn.—The Farmers Co-op. Elvtr. Co. declared an increase on dividend rates on all grains except flax at its recent annual meeting.

Bird Island, Minn.—Elmore Edmund is new manager of the Farmers Elvtr. Co. elevator, succeeding Frank J. Ryan who recently bought the H. F. Schulte elevator.

Cottonwood, Minn.—Peavey Elevators are installing at this station a new Soweigh 20-ton Motor Truck Dump Scale with 28 ft. platform and New Style Grain Beam.

Tyler, Minn.—Business of the Tyler Co-operative Co. increased more than 30 per cent during the last fiscal year. The gross business amounted to \$214,560. Net earnings were \$15,665.—F. E.

Org (Worthington p. o.), Minn.—W. F. Kasdorf has concluded an unbroken service of 28 years with the Farmers Co-operative Co. For 21 years he was in charge of the Org elevator of the concern, following seven years with the main house at Worthington.



Bemidji, Minn.—Grain storage bins are being constructed at a cost of \$100,000 by the United States government. The contract has been let to C. M. and L. R. Dickinson.—F. E.

Worthington, Minn.—Herman Gerischer has resigned as manager of the Farmers Co-operative Co. Clarence Woelfe, second man on the staff, will serve until a new manager is chosen.—F. E.

Minneapolis, Minn.—Dwight Major Baldwin, 75, pioneer miller who at one time operated mills and elevators in Graceville, Moorhead and Crookston, but who for the last 41 years has resided here, died recently.

Rushmore, Minn.—At the recent annual meeting of the Farmers Grain & Supply Co. plans were mentioned for building an annex. Mgr. Floyd Greig reported 1941 income was \$294,565; dividends were \$9,225.66.

Minneapolis, Minn.—Peter Johnson, 72, recently retired as superintendent of the Crescent Elevator "H" after 50 years in the grain business, 43 years at the Crescent Elevator and seven years at the Great Northern Elevator.

St. Paul, Minn.—The Kellogg Milling Co. has purchased and will operate the Jameson-Hevener Elevator, feed mfg. plant, and warehouses. The latter firm operated this plant for about 40 years, doing a general feed, grain, and storage business in mixed and straight cars. A large part of its business was with trucks bringing cattle to St. Paul and returning home with a load of feed or grain. The Kellogg Milling Co. is equipped to load mixed cars, also trucks, of feed and grain of all kinds and will carry in stock practically anything its customers will require. W. G. Kellogg, a partner in the firm, started in the grain business in 1905 with the firm of Fagg and Taylor, Milwaukee. In 1909 he organized the firm of Stacks & Kellogg, which was in operation until 1918, when he became associated with the Armour Grain Co. as general manager of its Northwestern grain business. When the Armour Grain Co. liquidated, the Minneapolis elevators were sold to Archer-Daniels-Midland Co., which Mr. Kellogg operated until the fall of 1929, when he went with the Federal Farm Board as general manager of the Farmers National Grain Corp. and vice-pres. of the Grain Stabilization Corp., later becoming associated with his brother as vice-pres. of the John Kellogg Co. Mr. Kellogg is vice-pres. and general manager of the Bunge Elevator Corp. at Minneapolis. The local plant is to be known as the "Victory Mills."

## MISSOURI

Lexington, Mo.—H. C. Ardinger reported a small loss recently sustained from high winds.

Edgerton, Mo.—The Edgerton Milling Co. recently sustained a small loss when high winds damaged its plant.

Clinton, Mo.—Leslie Lingle, who retired three years ago from the Lingle Grain & Feed store, died recently of a heart attack.

Dearborn, Mo.—The Dearborn Elevator opened July 6, with Fred Ketchum again in charge, and is ready to receive grain for storage.

St. Joseph, Mo.—Twenty-five employees of the Schreiber Milling Co. went on strike July 13, demanding an increase in wages. Ten employees refused to join the strike and remained at work. Mr. Schreiber declared the plant would continue to operate.—P.J.P.

Lancaster, Mo.—Miss Mary Martha Alexander, a bookkeeper for the Farmers Co-op., who accidentally drank some lye solution recently, has been released from the Grim-Smith Hospital where she had been under treatment since the accident occurred May 22.—P. J. P.

Lockwood, Mo.—The Lockwood Farmers Exchange is installing a 30-h. p. electric motor and a ton feed mixer at its elevator. J. R. McNiell, local manager, purchased the equipment from F. E. Gray, local miller, who closed his mill to devote his time to installation of milling equipment in other plants.

Clinton, Mo.—William Lee Pinkston, a former manager of the Farmers Elvtr. Co.'s elevator, died July 5 after a long illness.—P. J. P.

Wheaton, Mo.—H. A. Allman, owner of the Allman Produce & Feed, has purchased the Gordon mill and will raze the building, using the material to erect a warehouse east of his present hammer mill building. Mr. Allman will install feed grinding and mixing machinery in the new structure, and a large truck scale in the driveway.

Mexico, Mo.—The Pollock Milling & Elvtr. Co. plant was damaged by a terrific wind and rainstorm recently. The wind ripped off a 25 ft. sq. strip of metal sheeting on the roof, allowing the rain to pour into the northeast half of the five stories of the main mill. Flour rolls, purifiers, sifters, conveyors and bins had their contents converted into dough; belts were soaked, glued sections separated, and machinery damaged. The stock in store rooms was not damaged. The plant continued operations and repairs are being made.

Aurora, Mo.—The Majestic Flour Mill holdings here will be taken over by the Union Equity Co-operative Exchange, Enid, Okla., by negotiations nearing completion, Chas. B. Stout, head of the Dixie Portland Flour Co., Memphis, Tenn., recently announced. Immediate possession will be given. The deal includes the Majestic Flour Mill elevator, but not a flour mill as the latter was destroyed by fire a few years ago. The 420,000-bu. reinforced concrete elevator, a large warehouse and blending plant are the principal Majestic property. E. N. Puckett is manager of the co-operative, which recently withdrew from one of its elevators at Enid when the F.C.A. sold the structure of 2,500,000 bus. capacity to the Continental Grain Co., Kansas City. The Dixie Portland Flour Co. has leased the warehouse and blending plant included in the sale to the Union Equity Co-operative Exchange, and will continue to operate these units. Lawson Cook is local manager for Dixie Portland. Mr. Stout pointed out that, in disposing of its holdings here and also at Springfield, the company was merely disposing of surplus elevator holdings, and will continue to operate its 1,200 bbl. flour mill at Higginville, Mo., of which Hubert Edwards is manager, and also the Arkansas City Flour Mills Co., at Arkansas City, Kan., Morris Wilkins, manager. The Dixie-Portland also operates two other flour mills and a number of blending plants in the south and southeast.

Springfield, Mo.—Negotiations have been practically completed for the sale of the Eisenmayer Milling Co. property to Anheuser-Busch, Inc., St. Louis, Chas. B. Stout, head of the Dixie Portland Flour Co., Memphis, Tenn., recently announced. The local mill has been idle for some time, and in the transaction the Dixie-Portland Interests will retain the flour milling machinery, to be removed before the new owner takes possession within a month or two. Anheuser-Busch is planning to operate the Eisenmayer elevator, a 660,000-bu. modern house of concrete construction, as a feeder to its large plant located in St. Louis.

St. Louis, Mo.—Everett William Jones, 32, and Virgil Foster, 27, employed by the Grain & Feed Mills Co., have admitted the theft of more than 75,000 burlap bags valued at \$10,000 from the milling firm. Arrested, the men confessed posing as dealers and selling the bags as a way to make "easy money." They started taking the bags home in their automobile last October. They realized more than \$8,000 from the sales, officers who made the arrests, stated. Foster had \$789 in cash in his pockets when arrested. Of more than 80,000 bags stolen, police had recovered 4,724 late July 15. Of this number 1,100 were found in a garage used as a storage place pending their sale.—P.J.P.

St. Louis, Mo.—Strict control of shipments of grain for terminal storage at St. Louis, East St. Louis, Cahokia, Belleville, Granite City, Madison and Alton have gone into effect under the supervision of the St. Louis Terminal Grain Permit Com'te. Before an elevator can ship the farmer's wheat or other grain to any terminal storage point, it must first apply to the permit com'te who will check space and return the permit if any space is available. If different kinds of wheat are to be shipped, separate applications must be submitted covering each grade as, for example, soft red wheat or hard red wheat. The shipping permit, if granted, will show the kind of grain, prospective grade, test weight, and quantity indicated on the application. Any reason for an elevator's request to ship wheat, other than lack of storage space, also should be entered to give the permit com'te a clear picture of any emergency situation that may exist in a community. The permit com'te may call on A.A.A. to check such information, it was said. Hugh B. McCormick, permit com'te chairman, said "Very little terminal storage space is now available. Every shipper should understand that only a limited number of permits may be issued at the present time."

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## KANSAS CITY LETTER

William R. Smith was elected to membership in the Kansas City Board of Trade.

John W. Cain was elected president of the board of directors of the Midland Flour Milling Co., succeeding the late Carl B. Warkentin.

George B. Curry, 80, formerly of Oak Grove and Kansas City when engaged in the milling and grain business, died at his home in Ottawa.

J. P. Parks of the J. P. Parks Co. entertained 15 Kansas City feed men at luncheon July 9, on which occasion G. M. Bond, of the Chas. M. Cox Co., Boston, was guest of honor.

Stanley W. Dreyer, who has been associated for the past 15 years with the Dreyer Commission Co., St. Louis, will become associated with the Kansas City division of the company, of which his brother, Chas. B. Dreyer, is in charge. His father, Eugene C. Dreyer, head of the Dreyer Commission Co., will continue to direct the affairs of the St. Louis division.

Directors of the Kansas City Board of Trade at a special meeting July 13 voted permission for the shipment of inbound wheat from the Kansas City market on official state or board of trade destination weights for a period of 10 days. This was done to circumvent the possibility or necessity for an order requiring permits for the movement of free wheat, as had been in effect for some time for wheat intended for storage.

Kenneth Merrill, 19-year-old son of Harold A. Merrill, vice-pres. and treas. of the Davis-Noland-Merrill Grain Co., suffered a dislocated vertebra and an injury to the spinal cord in the course of a "double-jump" dive with another youth at the Mission Hills Country Club swimming pool July 12. The lower part of his body is paralyzed. With the second youth on his shoulders in making the dive, the boys became separated in mid-air, the other youth landing on Kenneth as he struck the water, feet first.

As a result of a threatened walkout of union employees of Kansas City mills as result of failure of mill operators and the Flour & Cereal Workers to agree on union demands for higher wages and other concessions, local mills without separate elevators suspended wheat buying July 15. The mills were shut down, however, only one day, after a telegram was received from John R. Steelman, director of conciliation for the department of labor, urging that there be no work stoppage in the war emergency. The strike of the 800 employees was ended by a vote of the workers upon receipt of the message.

## MONTANA

Nashua, Mont.—Work on the 13,000-bu. annex for the D. & B. elevator here is under way.

Columbus, Mont.—The Columbus Farmers Elvtr. Co. sustained a small loss recently from high winds.

Shelby, Mont.—Work is being rushed on the 30x76 ft. addition to the Newhouse Grain Co. elevator.

Cut Bank, Mont.—The Farmers Trading Co., Inc., has been organized, capital stock, \$50,000, to operate a grain business. Incorporators are: E. L. Anderson, Harriett Anderson and Helen L. Quist.

## NEBRASKA

Superior, Neb.—Hail damaged the Bossemeyer Bros. plant recently.

Falls City, Neb.—At a meeting of the Southwest Nebraska Grainmen's Ass'n recently held here Guy Cooper was re-elected president.

Leigh, Neb.—C. A. Troffholz of Richland has leased the elevator of the Leigh Lbr. & Coal Co. He will buy grain and sell feeds of all kinds. A feed grinder will be installed for custom grinding. J. A. Kibler will continue to handle the lumber and coal business.

Humboldt, Neb.—The O. A. Cooper Co. reported a small amount of damage at its plant from recent high winds.

Diller, Neb.—R. J. Bazant of Fairbury has taken over the management of the Black Bros. Grain Co. elevator, succeeding John Steiner.

Cedar Bluffs, Neb.—Louie Petersen has resigned his position at the Farmers Elevator, and has gone to Amarillo, Tex., where he has employment.

Omaha, Neb.—K. H. Jacobs has been appointed district sales manager for Pillsbury Flour Mills in this district. He formerly was located at Kansas City.

Kenesaw, Neb.—The Kenesaw Elvtr. Co.'s storage capacity has been exhausted, but the elevator will continue to buy wheat as usual, W. R. Stanley, mgr., announced.

Funk, Neb.—S. G. Mahaffey, manager of the Alma (Neb.) Equity Exchange elevator for the last five years, is new manager of the Funk Co-op. Grain Co. elevator, entering on his new duties July 15.

Callaway, Neb.—Bert Tubbs, who has been assisting at the Farmers Elevator, has been named manager for the coming year, entering on his new duties July 1. He succeeds Ross Douglas, resigned.

Fremont, Neb.—The Updike Grain Corp. elevator, the old Nye Schneider Fowler elevator, was destroyed by fire July 16, with a loss estimated at \$110,000. The house, of 100,000 bus. capacity, was almost filled with wheat.

Beatrice, Neb.—Robert Hart of Alexandria has been informed that the Hart-Bartlett-Sturtevant Grain Co. has been granted the necessary priorities from Washington, D. C., to allow construction of an elevator, work on which will start at once.

York, Neb.—The addition under construction by the York Milling & Elvtr. Co. will increase storage capacity of its elevator from 25,000 to 53,000 bus. The wooden framework will be covered with sheet-metal. Theo. Counter is local manager.

St. Edward, Neb.—K. W. Carter has purchased the P. D. Smith elevator and is making needed repairs and changes in order to use it for grain storage. Frank Reyboldson has succeeded Henry Jensen at the Kenneth W. Carter elevator, Mr. Jensen resigning to become manager of the Farmers Union Ass'n elevator, Fred Buck, former manager, having retired from active work.

Odell, Neb.—The O. A. Cooper Co. elevator pit has been enlarged and a large steel pan constructed. A wall has been built on the north side of the structure which will prevent water from leaking thru into the grain pits.

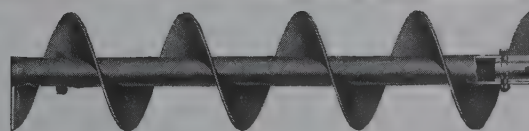
Dalton, Neb.—Fred Smith of Denver, who owns elevators here and at Kimball, has purchased the Dalton Elevator from A. D. Persson of Cheyenne, Wyo., and Brice Vandruoff of Broadwater. W. C. Brestel, who has been manager there, will continue in that capacity.

Prosser, Neb.—The County Grain Co. opened five elevators in Adams County, under the general management of K. R. Huyck, in charge of operations at the local elevator. Locations of the other elevators and the operators are Hansen, Lloyd Brown; Blaine, F. H. Yilk; Level, J. C. Gilmore; Muriel, Earl H. Schultz. Handling both cash grain and grain for storage, the elevators have a capacity of approximately 75,000 bus. They formerly were operated by the old Farmers Grain & Supply Co., and have been idle for the past few years.

Hastings, Neb.—The W.P.B. announced July 13 it had requisitioned rails and scrap metals from the 102 mile Hastings to Linwood, Neb., line of the Chicago & North Western Railway, for construction of spur tracks to war plants, ship yards and army installations. Situated along the above named railroad right of way are the towns, besides Hastings: Harvard, Stockham, York, Thayer, Surprise, David City, Octavia and Linwood, whose grain elevators and services are more or less affected by the order. The Hastings Mill, Farmers Grain & Supply Co., Schultz-Gruis Grain Co. and A. M. Brookings Grain Co. elevators are located here; besides the C. & N. W. railroad the town is serviced by three other railroads, the C. B. & Q., M. P. and U. P. railroads: Harvard, with Harvard Grain Co. Farmers Union Elvtr. Co., Goffe-Carkener Grain Co., is also on the C. B. & Q. railroad; York, with the York Milling & Elvtr. Co. elevator is on the C. B. & Q. line as well as the requisitioned C. & N. W. branch; David City has, besides the requisitioned line, the C. B. & Q. and the U. P. roads to service the Farmers Co-op. Grain Co., and David City Flour Mills Co. Linwood is situated on a junction of two branches of the C. & N. W., thus the Farmers Grain Co. retains railroad facilities. However, the requisitioned branch was the only railroad facilities for Stockham, location of Farmers Elvtr. Co.'s 28,000-bu. elevator; Thayer, with the Thayer Mills and Farmers

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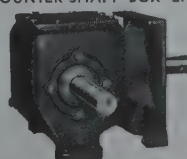


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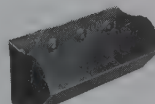
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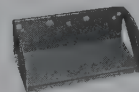
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## NEW ENGLAND

Johnson, Vt.—The feed mill and warehouse of the C. H. Stearns & Son Co. was totally destroyed by fire which was discovered about 1:30 a. m. on June 28.

## NEW JERSEY

Stewartsville, N. J.—S. A. Shillinger, owner of a feed concern, died recently after a short illness.

## NEW MEXICO

Albuquerque, N. M.—David Ruoff, 69, owner of a grain mill, died recently.

## NEW YORK

Otego, N. Y.—Lightning struck and slightly damaged a corner of the warehouse at the Susquehanna Valley Mills recently.

Irving, N. Y.—A carelessly discarded cigarette caused a small fire in the Louis A. Mott warehouse early in June. The blaze was extinguished with water from the water barrels.

Buffalo, N. Y.—Workers in Eastern States Milling Co., Maritime Milling Co., Pratt Food Co., Hecker H-O Division, Hecker Products Co. plants have been granted a pay increase of 5c an hour, it has been announced.

Buffalo, N. Y.—Buffalo's flour, feed and cereal mills' problem of securing an adequate supply of wheat was discussed at a recent meeting of vessel and grain and milling interests with government officials. The grain fleet, normally made up of scores of vessels, is now down to about a dozen. The difficulty of moving grain by rail is one of unloading, for elevator and mill facilities have been built to care for water-borne traffic. Approximately 80,000 box cars would be required to move the grain on the basis of last year's receipts.

## NORTH DAKOTA

Dodge, N. D.—The dust house of the Farmers Co-op. Elevator was demolished by recent high winds.

Hatton, N. D.—The Hatton Farmers Elvtr. Co. recently installed a Steinlite Moisture Meter at its elevator.

Mandan, N. D.—Considerable damage was done to the Russell-Miller Milling Co. elevator recently by high winds.

McClusky, N. D.—The 20,000-bu. annex to the Wahl Grain Co. is nearing completion. J. R. Klundt is manager.

Guelph, N. D.—H. J. Newman was re-elected manager of the Farmers Elvtr. Co. elevator at the recent annual meeting.

Wolford, N. D.—L. D. Davidson resigned as manager of the Farmers Elevator and Fred Bonn of Bisbee has succeeded him.

Golden Valley, N. D.—The Farmers Elevator will construct an annex, at a cost of \$7,300, to have a capacity of 40,000 bus.

Lakota, N. D.—O. J. Sundeen, formerly of Doyon, has taken over the elevator formerly operated by the Lakota Co-op. Elvtr. Co.

Grand Forks, N. D.—State Local Elevator has completed erection of its new plant in which new and modern equipment has been installed.

Langdon, N. D.—The Langdon Grain Co.'s elevator is being repaired. While work was in progress no grain was taken in for a few days. John Knudson is manager.

Coulee, N. D.—The St. Anthony & Dakota Elvtr. Co. has installed a new 20-ton Soweigh Motor Truck Dump Scale with wood deck 28x9 ft., equipped with the Compound Weigh-beam.

Ellendale, N. D.—Floyd Martilla was named manager of the Farmers Union Oil Co., replacing Paul Brosz, resigned, and Fred H. Dettloff was re-appointed manager of the Farmers Union Co-op. Elevator at the recent annual meeting of the companies.

Portland, N. D.—The Portland Farmers Union Elvtr. Co. at its recent annual meeting voted to build a 64,000-bu. annex to its elevator and contract was let to the T. E. Ibberson Co. The structure was to be completed this month. H. E. Lenaburg is manager of the elevator.

## OHIO

Springfield, O.—W. E. Tuttle & Co. recently sustained a small loss from high winds.

Alvada, O.—The Alvada Elevator recently installed a Kelly Duplex Hammermill with No. 4 crusher.

Swanton, O.—The Swanton Milling & Elvtr. Co. has installed a new electric truck hoist and grain cleaner at its elevator.

Perrysburg, O.—The Fort Meigs Milling Co. has been incorporated; incorporators, V. M. Selve, E. H. Welling and John L. Franz.

Jenera, O.—The Jenera Co-op Ass'n has installed a 1½-ton new style gearless mixer with motor, bought from the Sidney Grain Machinery Co.

Versailles, O.—Citizens Elevator has purchased a new style Revolving Screen Cleaner, which is manufactured by the Sidney Grain Machinery Co.

Minster, O.—The Minster Farmers Exchange Co. is serving customers over a new 15-ton Soweigh Motor Truck Scale with 28 ft. platform and grain beam equipment.

Fremont, O.—C. Clarence Wolfe, 67, prominent northwestern Ohio grain dealer, died July 7. Prior to his retirement in 1928 he operated elevators in Lindsey, Elmore and Fremont.

Beverly, O.—G. D. Leckrone of Perry County recently purchased the Huck Bros. feed store which he is operating under the name of Beverly Feed & Supply. The new owner has had 22 years' experience buying and selling of feeds, seeds and fertilizers, and will continue the grinding and delivery service of the business.

Columbus, O.—New members recently enrolled by the Ohio Grain, Mill & Feed Dealers Ass'n include the Pleasantville Milling Co., Pleasantville, O., and the Brown-Burnworth Co., Bremen, O.—W. W. Cummings, sec'y.

Van Wert, O.—Raymond Kaiser of Edon, O., has assumed the management of the Weiker Grain Co., succeeding Doyt Stemen who recently enlisted in the U. S. Army. Mr. Kaiser has been in the grain business for many years.

Clyde, O.—The Meggitt Elevator has started operations. L. M. Meggitt is owner. In addition to custom grinding, the sale of grain and fertilizer, the elevator, located on the Big Four Railroad, will buy grain, horses and livestock.

Tontogany, O.—The 100 ft. high wooden elevator and two iron grain storage tanks owned by the Mennell Milling Co., Toledo, were destroyed by fire July 9. Over 10,000 bus. of corn, wheat, oats and soybeans were in the bins. The loss was estimated at \$30,000.

Mt. Cory, O.—The Hancock County Farm Buro Co-op. Ass'n, recent purchaser of the Mt. Cory Elevator from A. J. Hosler, has assumed operations of the house. The elevator's modern equipment includes a hammer mill, feed mixer and seed cleaner. It has a storage capacity of 10,000 bus. of small grains and 4,000 bus. of ear corn. Two fairly new trucks also were included in the deal. Paul Greiser of Jenera has been appointed manager.

Columbus, O.—The directors of the Ohio Grain, Mill & Feed Dealers Ass'n at its recent annual meeting decided to cancel the ass'n's usual fall meeting this year and, instead, will hold a number of group meetings. Suitable speakers will be provided for these gatherings. It is thought much good may be accomplished thru these smaller group meetings and at the same time the tires and gasoline of members will be conserved, not having to drive so far. Any member wishing a group meeting held in his territory is urged to contact the sec'y.—W. W. Cummings, sec'y.

## OKLAHOMA

Orlando, Okla.—Everette George is now employed at the local elevator.

Enid, Okla.—Peter Lorenz, 88, pioneer grain dealer of Enid and Cordell, died recently.

Union City, Okla.—The Farmers Co-operative Elvtr. Co. has been dissolved.

Yukon, Okla.—The Yukon Mill & Grain Co. has had its charter extended 20 years from Jan. 10, 1941.

Pryor, Okla.—The old granary located on North Vann St., has been moved to the Bouldin-Thornton lease on the railroad right-of-way.

Stillwater, Okla.—D. E. Woodward has been named new manager of the Shannon Feed Company store, having taken over the duties of Marvin Justice, a reserve officer who reported for active duty in the army. Mr. Woodward has been general manager of the Shannon Feed Co. Tulsa office.—E.W.F.

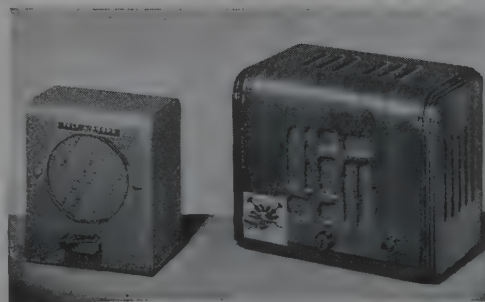
## R. R. HOWELL COMPANY

EVERYTHING IN MACHINERY  
AND SUPPLIES FOR

GRAIN ELEVATORS  
AND FEED PLANTS

MINNEAPOLIS, MINN.

## TALK-A-PHONE



### Inter-Communication System

Saves time and steps! Get and give information from any part of your plant instantaneously. Master Station can talk to any single sub-station or to all. Person at sub-station can answer without leaving his work from as far away as 50 ft. Easy to install. Economical in price. Immediate shipment. No Priority required.

SEEDBURO EQUIPMENT CO.

620 Brooks Building

CHICAGO, ILL.



Hobart, Okla.—The suit of the Farmers Co-operative Ass'n v. Barry Bros., grain brokers of Vernon, Tex., has been settled and dismissed.

Piper, Okla.—W. W. Wieters, manager of the Farmers Union Co-op. Exchange elevator which burned recently, stated the company hoped to rebuild the elevator.

Frederick, Okla.—Erection of a 10,000-bu. steel grain storage bin is nearing completion at the E. O. Billingslea Grain Co. elevator. Mr. Billingslea had planned to add three such units this season but was prevented from doing so by restrictions on all metals. Construction on other units recently has been completed.

Kingfisher, Okla.—The Kingfisher Mill & Elvtr. Co. and the Johnston Grain Co. have rented the armory building for grain storage. The milling firm has stored approximately 40,000 bus. of wheat in the two west rooms of the building and the Johnston Grain Co. will fill the auditorium with 75,000 to 80,000 bus.

Clinton, Okla.—The former Kimbell Milling Co., leased for this season by the Hoyt Grain Co. of Custer City, has leased the large brick building formerly occupied by the J. O. Witten Motor Co., which will provide storage space for 40,000 bus. of wheat. "It will solve our problems for the rest of the year," said A. D. Springer, manager of the local elevator.

Enid, Okla.—The Johnston Grain Co. leased the fair pavilion for wheat storage. It was estimated the pavilion will hold approximately 150,000 bus. of wheat. Johnston made the city an offer of \$200 a month for at least six months, and an unconditional option to continue until May 31, for  $\frac{1}{4}$  a bushel, whichever will bring the city the most revenue. He also said he would repair the roof at his own expense.

Tahlequah, Okla.—The Tahlequah Mill & Elvtr. Co. recently filed a complaint with Representative Nichols against the tearing up of the branch line of the St. Louis & San Francisco railroad between Fort Gibson, Okla., and Fayetteville, Ark., as ordered by the W.P.B. and Rep. Nichols took the matter up with the I.C.C. Residents along the Fort Gibson-Fayetteville route had protested at a local hearing against abandonment of the service, arguing that with the shortage of rubber it was becoming increasingly vital to the area. The I.C.C. officials said a hearing in Washington, D. C., was called for July 20 to determine the status of the line after the war. W.P.B. said that not only had it ordered the tracks of the above named line torn up but that it would direct similar orders for other infrequently used lines in order to obtain rails for army and navy needs.

## PACIFIC NORTHWEST

Belmont, Wash.—Roy Auvi is building a pea processing plant.

Driggs, Ida.—A flour mill and pea harvesting shed here burned recently.

Puyallup, Wash.—The Puyallup Feed Co. has filed notice of voluntary dissolution.

Prosser, Wash.—H. W. Fisk has finished an 8,000-bu. elevator on his Rattlesnake ranch.

Walla Walla, Wash.—The Walla Walla Grain Growers, Inc., sustained a small fire loss on July 6.

Uniontown, Wash.—The 24,000-bu. addition to the Uniontown Co-op. Ass'n elevator has been completed.

Pine City, Wash.—E. F. Smith recently sold his mill to the Inland Empire Milling Co., St. John, Wash.

Wilson Creek, Wash.—The Wilson Creek Union Grain & Trading Co. is building a 75,000-bu. capacity elevator.

Whitstran, Wash.—Swen Sampson is remodeling and enlarging his warehouse to a capacity of 40,000 bus. of wheat.

Thera (Diamond p.o.), Wash.—The Wheat Growers of Endicott have added 15,000 bus. storage capacity to their local plant.

Juliaetta, Ida.—The Lewiston Grain Growers elevator has been converted from sack to bulk storage, giving it a capacity of 150,000 bus.

Fairfield, Wash.—Charles Saylor is new manager of the Centennial Mill & Warehouse Co. He is moving his family here from Reardan.

Davenport, Wash.—The Washtucna Grain Growers have converted a sack warehouse into bulk grain storage. Schauerma Bros. had the contract.

Seattle, Wash.—Construction of the 800,000-bu. grain elevator leased by Kerr, Gifford & Co. is progressing rapidly, and is expected to be completed by Oct. 1.

Portland, Ore.—Kerr, Gifford & Co. have leased Terminal No. 4 from the War Department, effective July 1. The elevator has a capacity of 2,000,000 bus.

Mabton, Wash.—Ray E. Powell of Grandview is completing a 35,000-bu. addition to his elevator, doubling its storage capacity. The new section is 47x47 ft., 24 ft. high.

Pomeroy, Wash.—C. G. Shawen, veteran feed dealer, closed his business, The Shawen Feed Store, July 7, on the 37th anniversary date of its founding. Ill health compelled him to take a rest.

Ellensburg, Wash.—Jacobsen Bros., hay and grain dealers, will build a 50x200x25 ft. warehouse on the Northern Pacific right-of-way. The building will be used for storage of grain and hay.

Cunningham, Wash.—A permit for construction of a grain elevator by Worth Bros. was obtained from the agricultural division of the WPB. R. H. Sutherland, contractor, recently announced.

Grass Valley, Ore.—A 100,000-bu. grain elevator is being constructed here as an addition to the large elevator recently completed. The warehouse is being remodeled and bins are being built.

Asotin, Wash.—The Lewiston Grain Growers elevator has been increased in storage capacity 60,000 bus. by cribbing, giving the plant a 463,000 bus. bulk and 125,000 bus. sacked storage capacity. New machinery has been installed.

Lewiston, Ida.—Lewiston Grain Growers has completed a 160,000-bu. annex to its concrete elevator on the Snake River south of the Lewiston Beach. The addition brings the elevator's capacity to 370,000 bus. of bulk and 30,000 bus. sacked. The annex is 42x84 ft. and 60 ft. high.

Prosser, Wash.—Frank Smith, who recently purchased the large two-story limestone building opposite Fry's feed store, is taking down the upper story and will transform the main floor and entire basement into grain storage.

Kendrick, Ida.—The old elevator purchased in the spring by the Lewiston Grain Growers has undergone renovation for bulk storage and will hold 100,000 bus. John W. Shepard, manager of the company, stated total capacity of the company's 20 elevators and 16 warehouses will be 2,950,000 bus. bulk and 1,000,000 bus. sacked.

Harrington, Wash.—Lumber salvaged from razing old warehouse structures has been used by the Centennial Mills to construct a 70,000-bu. grain storage warehouse.

Pasco, Wash.—The 500,000-bu. terminal elevator of the Continental Grain Co. is practically completed. Originally of 200,000 bus. capacity, the elevator has been increased to its present size by construction of an addition.

Grandview, Wash.—Gordon Spencer, manager of the Grange Supply Co., plans to build a 20,000-bu. elevator, to be attached to the feed plant. Construction depends upon the ability to obtain priorities on certain materials.

Penewawa (Lacrosse p.o.), Wash.—A spur track has been laid to the Steuckle Bros. elevator that was built two years ago when barge service was about to be started on the river. A few loads of grain were transported down river during high water, but with the building of the railroad branch shipping may be done by rail at any time.

The Dalles, Ore.—M. G. Russi, who has been associated with the Wasco Warehouse Milling Co., severed all connections with the company on June 30. Mr. Russi handled flour and feed for many years and a few years ago became more active with the company due to the sudden death of Mel Beer and George Will, within a short time.

Pomeroy, Wash.—The Pomeroy Grain Growers, Inc., has taken over by purchase the Farmers Union Warehouse Co., with all its assets including warehouses, buildings, office fixtures and interest in storage up to May 15, 1942. At a special meeting of the Farmers Union Warehouse Co. it was voted to dissolve the corporation after 34 years of operation.

Colfax, Wash.—Permits have been granted by the agricultural division of the W.P.B. for construction of a second pea processing plant here. R. H. Sutherland, contractor, recently announced upon his return from Washington, D. C. Mr. Sutherland is interested in the proposed plant with an unnamed associate, and has secured an option on railway property as the site. If present plans materialize, construction will start in July.

Corvallis, Ore.—The Valley Milling Co. mill, formerly the Fischer flour mill, together with its contents and two Southern Pacific freight cars were destroyed by fire the night of June 30. The mill was erected in 1875. It had been in the Fischer family practically all of that time until a few years ago when it was purchased by the present owner, M. E. Eastwood, who changed its name and modernized the plant. The three story structure at the time of the fire was full of grain. The loss is partially covered by insurance.

Portland, Ore.—Thomas Kerr, of Kerr, Gifford & Co., president of the Portland Grain Exchange and member of the Portland Shipping Club, has received a commission as first lieutenant in the Army Transport Corps, and has reported at Fort Mason, California.—F.K.H.—Two of his brothers have preceded him in service. Donald Kerr, formerly vice-pres. of the States Steamship Co., is a captain in the Army Transport Corps on overseas duty, and George is a cadet in the Officers Training Corps at Camp Meade, Md. Tom Kerr resigned as president of the Portland Grain Exchange, and will likely be succeeded by George Grummeck of the Continental Grain Co., vice-pres. S. E. Mikkelsen will become associate manager of Kerr, Gifford & Co., it has been announced. Preston Smith will continue as vice-pres. and general manager of the company.



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Dependable  
Supplies

## STRATTON GRAIN CO.

MILWAUKEE, WIS.  
CHICAGO, ILL.    SPRINGFIELD, O.    ST. JOSEPH, MO.    NEW YORK, N. Y.  
MILL FEEDS — FEED PRODUCTS — BY-PRODUCTS  
Consignments and Future Orders Solicited



Seattle, Wash.—Setting up of fire-control districts in Washington's grain-growing counties have begun under a joint plan drawn up by civilian protection officials and agricultural agencies. Purpose of the plan is to guard crops against destruction by field or elevator fires according to Irving S. Smith, executive director of the Washington State Defense Council.—F.K.H.

## PENNSYLVANIA

Shippensburg, Pa.—We are no longer in the grain business.—William A. Nichols & Son, Inc., Bruce E. Hawk, mgr.

Salladasburg, Pa.—The grist mill owned by Norman Stover burned recently. Loss, \$40,000, partially insured.

## SOUTH DAKOTA

Wallace, S. D.—Hiram Hanson is new manager of the Farmers Elevator here.—F.E.

Florence, S. D.—The Pacific Grain Co. elevator recently was damaged by high winds. The loss was small.

Rapid City, S. D.—The warehouse roof at the Black Hills Warehouse Corp. plant was badly damaged by hail recently.

Emery, S. D.—The Wm. Driscoll elevator has been sold to Ray Cochrane, manager of the Farmers elevator at Leola.

Leola, S. D.—F. F. Kurth of Hecla was appointed manager of the Leola Equity Exchange. He succeeds Ray Cochrane who resigned.

Roscoe, S. D.—Ed Bernett, manager of the Farmers Elevator Co., has purchased the McCabe elevator and is entering business for himself.

Sturgis, S. D.—Tri-State Milling Co. is serving its customers over a new Soweigh 30-ton Motor Truck Dump Scale with 34 ft. platform.

Hammer, S. D.—Halver H. Hanson, who for five years was manager of the Farmers Elevator here, died at his home in Alexandria, Minn., June 23.

Faulkton, S. D.—Tri-State Milling Co. has installed a new Soweigh 30-ton Motor Truck Dump Scale with platform 34x9 ft. and equipped with New Style Grain Beam.

New Underwood, S. D.—Arnold Aby, former local manager of the Tri-State Milling Co., has leased the Farmers Elevator from the Camery estate and took possession July 1.—F. E.

Hecla, S. D.—Frank F. Kurth has resigned as manager of the Co-op. Elevator Co. elevator, R. B. Olson, formerly of Wyndmere, succeeding him. Mr. Kurth will manage an elevator at Leola.

Canova, S. D.—Glenn Schafer, manager of the local feed grinding and electric shop, has accepted a position at Carthage and his business here is being operated under the management of A. J. Jerde.

Pactola, S. D.—The Tri-State Milling Co. of Rapid City, S. D., was host to the Chadron (Neb.) Milling Co. employees, recently, at Camp Judson. Forty persons attended the picnic gathering, enjoying a day's outing in the hills.

Stockholm, S. D.—Arvid Johnson was elected president of the Stockholm Farmers Elevator; B. E. Berg was renamed sec'y at the annual meeting. The annual report showed the largest volume of business in the history of the company.—F. E.

Badger, S. D.—A net profit of \$16,700.47 was earned by the grain department of the Farmers Co-operative Grain Co. during the last fiscal year. A six per cent dividend was declared. Officers elected were R. W. Johnson, pres.; Arthur R. Paulson, sec'y; and L. H. DeWall, manager of the grain department.—F.E.

## SOUTHEAST

Rolling Fork, Miss.—The Sharkey County Farm Bureau has installed a Steinlite Moisture Meter in its elevator.

## TEXAS

Muenster, Tex.—The Kay Kimbell interests, which recently bought the Whaley Mill & Elevator Co. (headquarters Gainesville, Tex.), will continue operation of the local plant under the name of Whaley Mill & Elevator Co. Houston Maupin, who has been associated with the Whaley Mill & Elevator Co. for the past 20 years, will be local manager.

## WISCONSIN

Appleton, Wis.—The Liethen Grain Co. will build a 10,000-gal. gasoline storage tank.

Galesville, Wis.—The Farmers Exchange has opened a feed store.

New London, Wis.—Slipping V-belts caused a small fire in the New London Co-operative Exchange recently.

Milwaukee, Wis.—Harold M. Stratton, president of the Stratton Grain Co., was elected to the board of trustees by policyholders of the Northwestern Mutual Life Ins. Co.

Janesville, Wis.—Fire on July 4 caused damage estimated at \$400 to the Farley Feed Co. Spontaneous combustion was believed responsible for the blaze, which broke out in feed sacks.—H.C.B.

Superior, Wis.—The state grain and warehouse commission informed the bureau of personnel it was granting salary increases totaling \$180 a month to 21 of its employees effective July 1, 1942.—H.C.B.

Galesville, Wis.—The old Davis mill, now the property of Roy Lutz, is having repairs and improvements made, with prospects that the old mill wheel, idle for many years, will soon turn again as farmers' grains are ground into feed.

Madison, Wis.—Fred Dries, 29, crushed a finger in machinery at a seed and feed company plant he managed, started to walk away, fainted and fell, his head striking the cement sidewalk. Injuries sustained were fatal. He never regained consciousness.—P. J. P.

Stoughton, Wis.—Ownership of the Klöngland Feed Mill, which heretofore has been vested in a corporation known as the City Feed Mill, Inc., recently was transferred to an unincorporated partnership composed of Mrs. Emilie Klöngland, her son, Owen, her daughter, Mrs. Arnold M. Anderson, and Obert T. Aselson. The firm will continue to be known as the City Feed Mill with Mr. Aselson as manager.—H.C.B.

## Wheat Prices Boosted by Political Measures

The huge surpluses of wheat in the United States make it not only possible but desirable to divert quantities of wheat for animal feed and for the production of alcohol and other non-food uses, but political pressures offer strenuous resistance to such action, Dr. Joseph S. Davis, director of the Stanford University Food Research Institute, reports.

"If the country is to reap the benefit of its grain reserves it must use them instead of hoarding them, and use much of them for feed," contends Dr. Davis in the May issue of *Wheat Studies*, released today by the Stanford Food Research Institute.

Political measures have boosted wheat prices in the United States to levels suggestive of a shortage rather than the existing embarrassing abundance, the Stanford wheat expert says.

"The political price level of wheat has been an important factor limiting the use of wheat for feed and its flow into export, and has been partially responsible for piling up the unprecedented stocks that clog the channels of trade."

The wheat survey indicates that although the crop increase was only 16 per cent, the cash income of United States farmers from wheat rose from \$428,000,000 in 1940 to \$702,000,000 in 1941.

## Driveway Observations

BY TRAVELER

CHARLES E. GALLAGHER, at Meriden, Ill., remarks: "Elevator owners and operators ought to be extra careful now to clean up the dead weeds, grass and rubbish around their elevators. These large locomotives spew out a good many hot sparks, and such hot sparks, landing in dead weeds around an elevator could cause a hot blaze in a few minutes and endanger our elevators."

"We can't afford to lose an elevator under present conditions. It would be almost impossible to replace it. So we must take extra precautions to save what we have."

One elevator in Northwestern Iowa, burned recently, could not be replaced, and the only way the company managed to stay in business was by buying another elevator at another town.



## FOR VICTORY!!

"Food Will Win the War and Write the Peace."

Secy. Wickard

Step up the capacity of your elevator with Calumet scientifically designed, super capacity Elevator Buckets.

No expensive changes necessary. Just install Calumet Cups and increase capacity up to 50% or more.

Without obligation, write for guaranteed proposal GJ-7.

B. I. WELLER CO.

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CHICAGO, ILL.

CALUMET

SUPER  
CAPACITY  
ELEVATOR

CUPS





*Next to the Stars and Stripes . . .*

## AS PROUD A FLAG AS INDUSTRY CAN FLY

Signifying 90 Percent or More Employee Participation in the Pay-Roll Savings Plan

It doesn't go into the smoke of battle, but wherever you see this flag you know that it spells Victory for our boys on the fighting fronts. To everyone, it means that the firm which flies it has attained 90 percent or more employee participation in the Pay-Roll Savings Plan . . . that their employees are turning a part of their earnings into tanks and planes and guns *regularly*, every pay day, through the systematic purchase of U. S. War Bonds.

You don't need to be engaged in war production activity to fly this flag. Any patriotic firm can qualify and make a vital contribution to Victory by making the Pay-Roll Savings Plan available to its employees, and by securing 90 percent or more employee participation. Then notify your State Defense Savings Staff Administrator that

you have reached the goal. He will tell you how you may obtain your flag.

If your firm has already installed the Pay-Roll Savings Plan, now is the time to increase your efforts: (1) To secure wider participation and reach the 90-percent goal; (2) to encourage employees to increase their allotments until 10 percent or more of your gross pay roll is subscribed for Bonds. "Token" allotments will not win this war any more than "token" resistance will keep our enemies from our shores, our homes. If your firm has yet to install the Plan, remember, **TIME IS SHORT.**

*Write or wire for full facts and literature on installing your Pay-Roll Savings Plan now. Address Treasury Department, Section D, 709 12th St., NW., Washington, D. C.*

*Make Every Pay Day "Bond Day"*



U. S. **WAR Bonds ★ Stamps**



## Patents Granted

[Since last published in the Journals.]

No. 2,288,809. Cover for Grain Bins. Wilbur B. Larkin and Victor C. Norquist, Kansas City, Mo., assignors to Butler Manufacturing Co., Kansas City, Mo. A cover for grain bins and the like, made up of a plurality of steel segments, and a sleeve protected vent opening to cap the roof cone created by the assembled segments.

No. 2,287,949. Vitamin E. Substitute and Process of Making It. Lee Irvin Smith and Herbert E. Ungnade, Minneapolis, Minn., assignors to Regents of the University of Minnesota. A chemical compound with a defined structure.

No. 2,288,379. Weighing Mechanism Feeder. Edric W. Vredenburg, Oakland, Cal. This device is a hopper for a supply of material, and a plurality of rolls, each of which has a plurality of circumferential grooves, and a plurality of members extending in the direction of the grooves.

No. 2,287,357. Lubrication of Conveyor Rollers. Tage Georg Nyborg, Worcester, Eng., assignor of one-half to The Mining Engineering Co. Ltd., Worcester, Eng. Means for lubricating a bearing, including two relatively rotatable concentric elements spaced apart to provide an oil reservoir. Deeply recessed chambers in these elements carry oil inward.

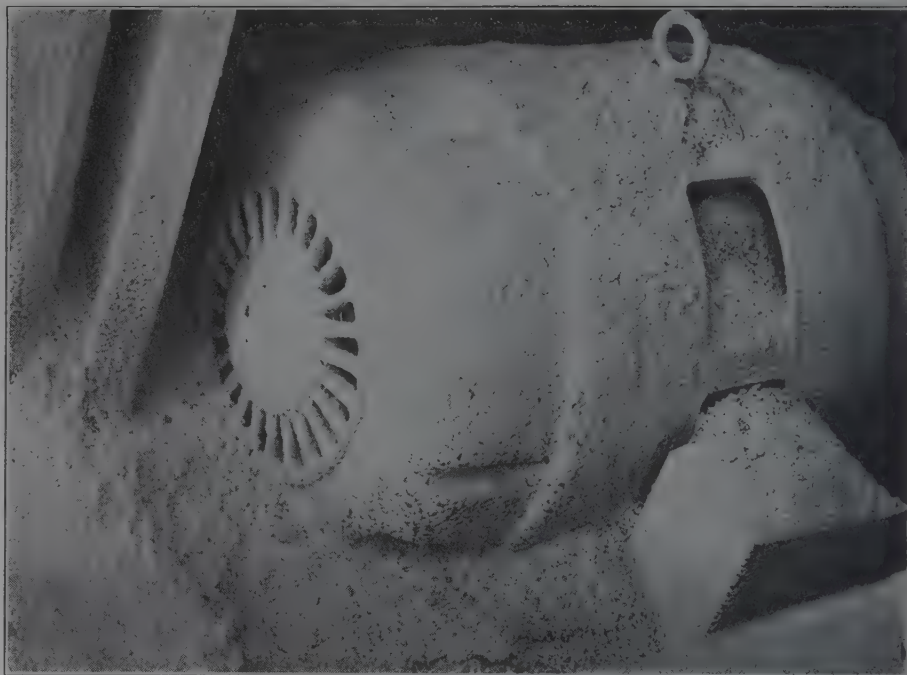
No. 2,287,659. Grinding Mill. Charles M. Binder, Normandy, Mo., assignor to Dixie Machinery Mfg. Co., St. Louis, Mo. Mill has a base which forms a longitudinal sump with an endwise outlet, at least one air inlet at the opposite end, and an upward opening to the grinding chamber. Axis of grinding means is parallel to the sump. Mill motor is direct connected to rotor, and is supported on a bracket base from the sump inclosure. Separate motors operate the mill and the sump.

No. 2,286,279. Ear Straightener for Corn Pickers. Benjamin M. Hyman, Moline, Ill., and Hector C. Ferguson, La Porte, Ind., assignors to International Harvester Co., of New Jersey. Device is related to husking rolls, has flaps extending toward husking rolls at an angle to conveyor, and an ear straightener positioned over the end of the husking rolls.

No. 2,286,579. Conveying Element. Arthur C. Schroeder, Syracuse, N. Y., assignor to Redler Conveyor Co., Quincy, Mass. This conveyor flight is a unitary length of bar stock shaped to form a transversely extended open flight. Flights interlock.

No. 2,286,580. Conveying Element. Arthur C. Schroeder, Syracuse, N. Y., assignor to Redler Conveyor Co., Quincy, Mass. This flight unit comprises a sheet metal flight, and a tension member of bar stock shaped to provide a loop portion at one end and a hook portion at the other end. The flights form a closure for the hook portions.

No. 2,286,825. Self-Aligning Bearing Construction. Francis E. Montgomery, Des Moines, Ia. The bearing element has two oppositely extending arm projections on its periphery. These projections rest in a plane bisecting the center of the bearing element, and connect with



Head drive motor half buried in dust

grooves in the lugs supporting the bearing, thus allowing the bearing to rock back and forth to accommodate itself to the shaft.

No. 2,286,987. Air Separator. Thomas J. Sturtevant, Wellesley, Mass., assignor to Sturtevant Mill Co., Boston, Mass. Salient feature is a fan which operates in relation to baffle plates to separate air and powdered material fed into the device.

No. 2,285,406. Permanent Magnet. Clarence George Bieber, Huntington, W. Va., assignor to the International Nickel Co., Inc., New York, N. Y. No drawing. A hot worked alloy capable of developing magnetic properties including high coercive force and high remanence suitable for permanent magnets, comprising about 5% to 9.5% aluminum, 1% to 3% titanium, 20% to 30% nickel, and the balance iron.

Unprotected light bulbs should not be lowered into grain bins. Swinging on the end of the drop cords, they are apt to strike the side of the bin and break. If grain has been run into them a short time before, there may be floating dust, ready for ignition and explosion. Even if there is no explosion, it is hazardous for the customers to receive grain containing bits of broken glass.

## Creating Hazards Needlessly

Herewith is a picture of a 10 h.p. inclosed motor driving a leg in a busy country grain elevator recently during wheat transfer operations.

Transferring of old wheat naturally means dust, a great deal of dust. But this looks like more than a temporary accumulation.

The evidence supports this conviction because we saw a man in the driveway of this elevator smoking a cigarette while the leg was in operation, and the atmosphere so thick with dust that a modern dust mask would have provided material comfort.

We do not understand why the elevator has not exploded or burned, but it has stood for nearly 30 years and is a very active plant.

Inclosed motors are a necessity under such conditions, if the plant is to continue handling food for the Allies.

Australia is expected to reduce the acreage of wheat, as exports are limited and the visible supply is 120,000,000 bus., against 55,000,000 bus. a year ago.

A vegetable oil and packing house products transportation committee has been appointed by Director Eastman of the O. D. T. to eliminate cross hauls. The committee of 7 includes A. M. Hall of Spencer Kellogg & Sons, W. A. Mayfield of Swift & Co., G. C. Burwell of A. E. Staley Mfg. Co. and G. B. McLean of the Central Soya Co.

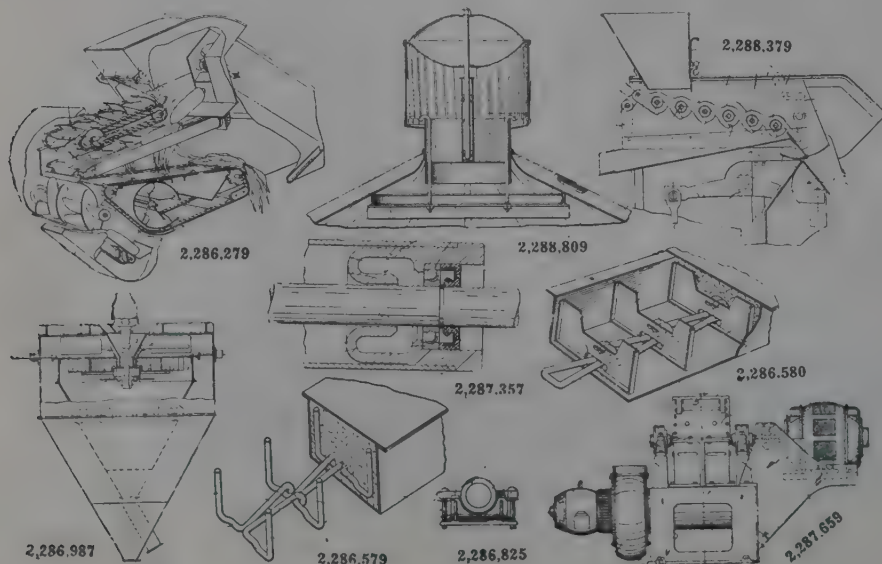
## Building Bins for the C.C.C.

Firms in the Northwest which have received contracts to build wheat storage bins for the Commodity Credit Corporation include:

Field-Martin, 2,400 bins; Kindem Construction Co., 3,000 bins; Scott-Graff & Industrial Construction Co., 1,000 bins, all of Minneapolis. The Northland Construction Co. of St. Cloud has contracted for 700 bins, and the Heinbach Lumber Co. of Duluth will furnish an additional 500 bins.

The Bell Lumber Co. of Green Bay, Wis., will make 1,000 bins, while the Robbins Sash & Door Co., of Rapid City, S. D., will produce 500 units.

The Klein Lumber Co., of Bismarck, N. D., is to build 750 bins while Iowa firms receiving contracts for a total of 1,850 bins included the F. B. Dickinson Co. and the Western Silo Co. of Des Moines.





## Supply Trade

**Minneapolis, Minn.**—Charles F. Pierson, treas. of the Superior Separator Co., reported for duty last month as a junior grade lieutenant in the U. S. N. R., and is temporarily assigned to the Naval Air Base, Norfolk, Va., Fighter Detector School.

**Steinlite Moisture Testers** have recently been installed in the following Texas plants: Farmers Associated Elevators, Black; Gist Grain Co., Adrian; Farmers Supply Co., Dahlhart; Kingsville Mfg. Co., Kingsville; Farmers Elevator Co., White Deer.

**The urgent need for typewriters** in the War Program has brought an appeal from the Army and Navy thru the WPB Office Machinery and Equipment Procurement Committee to American business and industry to relinquish to the services every typewriter than can be spared. The existing new typewriter dealers and manufacturers' representatives and independent dealers will act as purchasing agents. Typewriters manufactured since Jan. 1, 1935, are wanted. Each machine purchased will be marked to prevent its return to trade channels.

**Chicago, Ill.**—Earl C. Moss, one of the country's outstanding power transmission engineers, passed away July 8. From 1905 to 1938 Mr. Moss was local manager for the Morse Chain Co., and thereafter served as sales and consulting engineer. Many of the silent chain drives in use in grain elevators thruout the central west were designed by Mr. Moss, and while his work in this field was extensive, some of his most notable achievements were in other fields, of special import was the world's largest silent chain unit which he designed for a power project at Snake River, Idaho.

**The Federal Crop Insurance** branch office at Kansas City will be closed Oct. 1. A new office will be opened in Denver to consolidate the Kansas City, Spokane and Minneapolis offices. The only other wheat insurance office is in Chicago.

**All persons or firms** who at any time during the year of 1941 had in their possession new and/or second-hand bags equivalent to 20,000 yards of burlap, must submit an inventory of same with WPB, Division of Industry Operations, at Washington. This is required by Conservation Order No. M-47.

## A Grain Separator with Desired Improvements

To ascertain what improvements in grain cleaning machinery were most wanted the Superior Separator Co. in 1940 sent a questionnaire to 2,500 firms in the business of handling grain asking for the specific and practical improvements that were most wanted.

From the many replies received, three demands stood out: (1) cleaners should be lower to fit under low ceilings and to permit spouting from more bins into one machine; (2) cleaners should be more compact to save limited space on work floors; (3) aspiration should be still further improved.

The accompanying illustration shows the completely new design that made those three improvements possible in one machine—the Country General. The Country General embodies all the proved advantages of the all-cylinder cleaners, using the patented double cylinder and the four cylinder principle as well as the exclusive automatic repeat. Those thoroly proved features were built into a new design that is "streamlined" to the maximum.

The 4-cylinder Country General, illustrated herewith, is 6' 3" low, fitting easily under the lowest ceilings and permitting spouting from several bins. The capacity is 400 to 500 actual bus. per hour, yet the over-all length is only 9' 10" and the over-all width is only 4' 7½".

The Country General comes ready to install, except for the dust pipe. Scalper and aspirator are built in, underneath the streamlined paneling. Drives and the motor are fully enclosed, with the motor inside the machine, protected from dust. Removable panels give instant access to all moving parts.

The scalper is at the side, out of the way, so scalped material does not strike the operator, but falls into a removable receptacle for easy disposal. Another convenient feature that operators like is that liftings can be automatically spouted into the oats when cleaning wheat or into the seeds when cleaning oats.

The new design permits doubling the aspiration. The famous Superior double duct aspirator is now 7' 4" long. The grain stream is so thin and so evenly distributed that ALL chaff, dust, shriveled grain and other waste is lifted easily by the air, without taking any of the sound grain. The grain is spread so thin that it cannot beat the liftings back out of the air stream. Working at peak capacity, the aspiration is still perfect.

In addition to the 4-cylinder model shown, the

Country General is made in 7-cylinder and 8-cylinder models. Readers of the Journal will be given additional information on application to the manufacturer.

## Checking Tire Waste

Local boards, in their discretion, may refuse to grant certificates to applicants when the inspector's report shows:

The tires to be replaced have been run beyond the point where they can be repaired or recapped. (Specifications have been drafted to determine what that point is.)

Tread plies have become separated due to overloading, neglect in keeping tires properly inflated, or operation at high speeds.

The casing has been damaged by running flat.

Dual tires have been improperly matched.

Wheels are out of alignment.

The tire has been damaged by uneven braking.

Spotty wear indicating that the tire has been run on a bent rim.

It is recognized that the above standards are not absolute and that there may be mitigating circumstances. When tires have been damaged by faulty wheel alignment, for instance, or by uneven braking or mounting on a bent rim, the local board may withhold action under the abuse standards if the operator of the vehicle on which the tires are mounted can show that he has corrected the condition or has taken steps to get it corrected.

**Louisville, Ky.**—Herman F. Willkie, vice-pres., in charge of production, of Joseph E. Seagram & Sons, claims that under a new process for producing synthetic rubber from grain, and without first converting it into ethyl alcohol, a plant with capacity of 200 tons daily, can be erected and placed in operation within six months, and using a comparatively small amount of critical material.—A. W. W.

## Cipher Codes

**Universal Grain Code:** Most complete, up-to-date grain code published. Effects a greater reduction in tolls than any other domestic code. 150 pages, 4½x7 inches. Price, leather, \$3.00; paper, \$1.00.

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**Millers Telegraphic Cipher:** (1936) For the flour feed and grain trades. 157 pages, 3½x6½ inches. Cloth bound. Weight 6 ozs. Price \$2.00.

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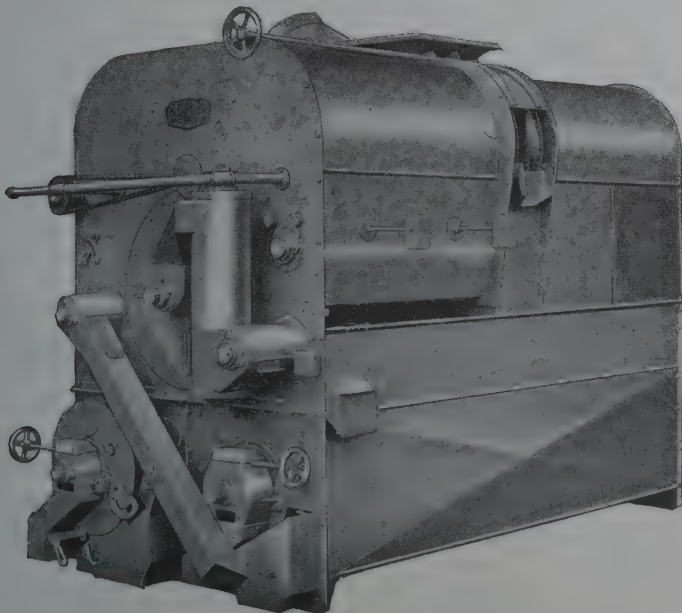
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GRAIN & FEED JOURNALS  
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327 So. La Salle Street CHICAGO, ILL.



The Country General Grain Cleaner



# Field Seeds

**Stanley, N. D.**—R. P. Archer has moved his seed store across the street to a new location.

**Crawford, Neb.**—Virgil Cosgrove has succeeded Walter Iossi as manager for the Tri-State Seed Co.

**Roswell, N. M.**—The Mitchell Seed & Grain Co. has been formed by Mary L., and Ervin W. Mitchell and Harold Hurd.

**Sacramento, Cal.**—A seed testing school for commercial analysts was conducted July 6 to 11 by the Federal-State Seed Laboratory.

**Sun Prairie, Wis.**—Fred Dries, 29, manager of the Mayr Seed & Feed Co. for several years, died July 2 in a Madison hospital as the result of a fall.—H. C. B.

**Toledo, O.**—The Ohio Seed Trade Ass'n. recently elected Seymour Hirsch, Toledo, pres.; Max Scarff, New Carlisle, vice pres., and C. B. Mills, Marysville, sec'y-tres.

**Louisville, Ky.**—The Louisville Fertilizer & Seed Co. has been incorporated with \$1,000 capital stock, by H. G. Schepman, L. W. Beidler and D. E. Hesterman.—A. W. W.

**St. Joseph, Mo.**—Falling from the 4th to the 2d floor of the Mitchellhill Seed Co.'s plant Clarence McFarland, an employee 19 years old, suffered a slight concussion and scalp injuries, not serious.—P. J. P.

**Bloomington, Ill.**—Joseph E. "Jim" Barnes, who has served as botanist for the Illinois State Seed Laboratory for the past ten years, is entering the commercial field. He has entered the employ of Funk Bros. Seed Co.

**Salt Lake City, Utah.**—The business of the Westland Seed Co. has been taken over by Northrup, King & Co., of Minneapolis, Minn. Maurice Keating of the Westland Seed Co. now is with Northrup, King & Co., at Berkeley, Cal.

**Albany, Ore.**—The Albany Seed Co. recently held open house at its new seed cleaning plant. The floor space is 40,000 square feet. The battery of seed cleaners is one of the largest in the west, with a capacity of 400 sacks per hour.

**Washington, D. C.**—The present program for the purchase of dry beans will be closed by the U. S. Dept. of Agriculture Aug. 31. A new price-supporting program will begin Sept. 1 on the 1942 crop of pea and medium white. Great Northern, California small white, pink and pinto.

**State College, Miss.**—The third annual meeting of the Mississippi Seed Improvement Ass'n was held July 8 at State College. George Perry, Maud, was elected pres. of the association, succeeding Harrison Evans, Shuqualak. George B. Perry, Stoneville, was named vice pres. Membership in the Mississippi Seed Improvement Ass'n. includes more than 200 growers of certified field crop seed. The association serves as the official certifying agency as designated by the State Seed Improvement Committee in 1939. Last year crops of certified seed of cotton, corn, oats, and other small grains exceeded \$1,500,000 in value, and the current crop of oats will exceed 220,000 bushels, according to J. M. Weeks, of State College, sec'y.

**Carroll, Ia.**—Claude J. Blumer of Sioux City has succeeded Don J. Huck as manager of the Kollman-Warner Seed Co., Mr. Huck being promoted to the main office at Norfolk, Neb.

**The Oregon Feed & Seed Dealers Ass'n** has been informed by wire from Senator McNary that dealers would receive 40 cents for peas, and 45 cents for crimson clover and hairy vetch, which is satisfactory to the special committee of the Ass'n that has been working for months.

**Shelbyville, Ind.**—To keep rats away from his valuable hybrid seed corn Peter J. Lux, former international corn king, installed a radio in his big barn. The radio is turned on 24 hours a day to scare away the rats. Apparently a version in reverse of what the Pied Piper of Hamelin did when his music charmed the rats into the river Weser.

**Princeton, N. J.**—Dr. Geo. H. Shull has retired from the faculty of Princeton University after 27 years of teaching. While engaged in research for the Carnegie Institute at Cold Springs Harbor, N. Y., from 1904 to 1915, Dr. Shull crossed pure line varieties of self-fertilized corn to produce hybrids, the first commercial use of his discovery being made in 1922 by the Pioneer Hi-Bred Corn Co., of Iowa, in which Vice Pres. Henry A. Wallace was interested.

## Rogue Early for Pure Seed

Since last year the rules and regulations for certified seed have been revised in North Dakota. Tightening the tolerances allowed for diseases and admixtures was necessary to improve the quality of seed stocks. Purity can be maintained only by careful and timely roguing.

## Illinois Seed Dealers Meet

Pres. Lee A. Beebe of Forreston, Ill., called the meeting of the Illinois Seed Dealers Ass'n to order at Peoria, Ill., July 8, with a good attendance.

JAS. YOUNG, Chicago, executive sec'y of the American Seed Trade Ass'n, spoke on national affairs, giving a list of parity prices on seeds.

RAY LANG, Madison, Wis., said the acreage of red clover in Wisconsin was about the same as last year. Farmers have plenty of hay and in his opinion will hull the second cutting for seed.

GUY PURCELL, Evansville, Ind., said recent rains may have some bad effect on the red clover seed crop.

HENRY KLING, Cedar Rapids, Ia., said the prospect was for a large crop of timothy seed in Iowa.

J. C. HACKLEMAN, University of Illinois, said red clover had been hurt so much by the rain that it had not yet been cut. Red top looks fine.

CHAS. H. KELTNER, Springfield, Ill., in charge of the seed laboratory, told of changes that had been made to speed up the work to give earlier reports on seed samples sent in.

## Hybrid Corn Men Organize

With Ted Robinson of Waterloo, Neb., as acting chairman, the Hybrid Seed Corn Division of the American Seed Trade Ass'n got off to a flying start at the Palmer House, Chicago, July 11.

In attendance were practically all of the hybrid seed corn producers, big and little, to the number of 60 or more. Pioneer, DeKalb, Funk and Pfister were there in force.

E. T. ROBINSON stated the purpose of the meeting was to form a hybrid corn division separate from all other groups, under the general supervision of the American Seed Trade Ass'n. "We have acting as temporary secretary the secretary of the American Seed Trade Ass'n, James Young." "Forces are at work in our country that make it imperative that we present a united front to secure tires and gas."

MR. YOUNG: It has been my idea as the executive sec'y of the A.S.T.A. that we set up an organization like that of the Farm Seed Ass'n. Members of the A.S.T.A. are qualified for membership in the seed corn group.

MR. ROBINSON appointed a nominating committee consisting of Lester Pfister, Dr. Holbert, G. F. Kellogg, Cliff Corneli and Wm. Jacques.

MR. ROBINSON: The group will use the secretary's office as a clearing house for correspondence. It is fundamentally wrong for me to have to go to Washington to get 20 feet of copper wire, and take up the time of some man who ought to be at work winning the war.

J. LIST PEPPARD, Kansas City: An appeal made by an individual at Washington is susceptible of a selfish interpretation. No industry to-day is able to contribute so much to the war effort as the hybrid seed corn industry.

OFFICERS named by the nominating committee were elected as follows: Pres. Fred W. Lehmann, of the Pioneer Hi-Bred Corn Co., Des Moines, Ia.; vice pres., J. R. Holbert, of Funk Bros. Seed Co., Bloomington, Ill.; sec'y, Geo. M. Strayer of Associated Hybrid Producers, Hudson, Ia.

Advisory board: Wm. Jacques, Wisconsin; C. E. Troyer, Indiana; E. T. Robinson, Nebraska; J. R. Huey, Illinois; J. E. Van Fossen, Ohio; S. G. Turner, Illinois; Thos. Roberts, Illinois; C. R. Pommer, Missouri, and John Shaver, Minnesota.

## New Seed Trade Marks

O. M. SCOTT & SONS CO., Marysville, O. No. 451,657. "Garden Club," for grass seed.

HYGRADE SEED CO., INC., Fredonia, N. Y. No. 452,353. "Make every plot a garden spot," in script lettering, for vegetable and flower seeds.

TERMINAL GRAIN CO., Fort Worth, Tex. No. 418,058. "Blue-Tag" and a representation of blue tags tied together with a red ribbon, for seed grains and field seeds.

WESTLAND SEED CO., Berkeley, Cal., a subsidiary of Northrup, King & Co. No. 450,075. The word "Sierra" over mountains represented as ringed within a circle, for field, garden, farm, and grass seeds.

WE ARE BUYERS AND SELLERS OF  
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## Save Oats Seed for 1943

Farmers who grew the new disease-resistant varieties of oats this year are urged by E. S. Dyas, extension agronomist at Iowa State College, to save the seed for 1943.

Boone, Tama, Control and Marion, especially the first three named, again demonstrated good resistance to leaf and stem rust and complete immunity to smut.

There should be enough seed of these new oats to plant the entire Iowa oats acreage next year if the seed is saved. It is estimated that more than 20 million bushels will be produced. About 15 million will be needed for seed, figuring around 5 million acres and 3 bushels to the acre.

Changing over to these new varieties would go far toward restoring Iowa's reputation as the leading oats-producing state in the Union, the agronomist declared. While Iowa still leads in number of bushels produced it trails behind other Corn Belt states in yield per acre and quality of the crop. In 1941, a bad rust year, 88 per cent of the Iowa oats crop graded No. 3 or lower, while in a neighboring state, Illinois, 85 per cent of the crop graded No. 1.

## Kota Flaxseed

Among varieties of flax introduced within 1941 was Kota, produced at the North Dakota experiment station at Mandan.

Kota is a cross of Bison and B. Golden, both developed by the N. D. Agricultural College department of botany and plant pathology and introduced by Dr. H. L. Bolley and Prof. T. E. Stoa.

The parent varieties originally were from the best available Argentine plants and other crosses, Dr. Bolley said, and the new plant combines the qualities of rust resistance and production, together with other desirable qualities.

Bison flax figures in another cross, with Redwing, for a new variety, Biwing, of which there are 2,000 bushels available for distribution for the next season.

From Bison, Biwing has inherited moderately large seed size, medium high oil content, exceptional resistance to wilt and high yielding ability, and from Redwing, high oil drying quality, moderate resistance to flax rust, and high yield.

## Good Varieties to Be Certified in Indiana

Seven new improved varieties resulting from the work of plant breeders are included along with standard varieties of small grain in the certification program of the Indiana Corn Growers' Ass'n this year, it was announced at Purdue University this week.

Balbo rye, an earlier growing strain than is commonly found in the state, having superior pasture quality, Vicland and Marion oats of excellent disease resistance, and Forkeddeer and Fulwin winter oats adapted to southern Indiana have been added to the list of eligible varieties. Thorne wheat, a recent newcomer from Ohio, has been added to the list of old standbys commonly grown in the state, and in the fall of 1942, Fairfield will be distributed to certified seed growers from Purdue for the first time.

Among winter barley varieties, Kentucky No. 1 leads all others in popularity and performance, and of the spring varieties, Alpha, Spartan and Wisconsin No. 38 are those most commonly certified.

Many growers in the state who plant certified seed of these and other varieties eligible for certification, are now making application for inspection to the association at Lafayette. Five hundred growers certified almost a half million bushels of seed in 1941, according to the final seed directory of the association, and a greater volume of certified seed is in prospect for 1942.

## Better Wheat in Nebraska

Good wheat and lots of it! That's the situation in Nebraska this year. Not since 1930, when the state harvested the largest crop in history, 72,000,000 bushels, have the Nebraska wheat fields produced so generously. Interest is running high in the yields per acre, but farmers have also expressed greater than usual interest in the milling and baking quality of the 1942 wheat crop.

The Nebraska Grain Improvement Ass'n in cooperation with the Extension Service recently completed a series of 18 wheat improvement meetings at the "100 farmers' wheat tests" planted throughout the wheat producing areas of the state. More than ever before farmers were asking "Is my wheat a good milling and baking variety?" Farmers in general are coming to realize that this is a far more important consideration in growing wheat today than formerly because of the large volume of wheat on hand in the United States and the more refined methods of determining wheat quality. Millers can be more "choosy" about the wheat they buy and if certain areas aren't producing the kind of wheat that makes the best bread they soon find it out and wheat from that region isn't in strong demand.

There was a time of course when wheat was just wheat, especially when all the wheat produced in the hard red winter area was Turkey. When undesirable results were obtained in the mill or the bake shop, it was often impossible to tell what was causing the trouble. The advent of cereal chemistry of course has changed all this and today the modern mill laboratory has placed more exacting requirements on the wheat that comes to market. The present day wheat producer must know therefore what varieties of wheat are best from the trade standpoint as well as which variety is best adapted to his growing conditions.

Unfortunately not all varieties of wheat are desirable bread wheats. In general, in Nebraska, the Turkey type wheat such as the original Turkey, first brought to Nebraska by the early Mennonites, and such Turkey selections as Cheyenne, Nebraska No. 60 and Nebred are acceptable to the trade. The classification of farmers' samples of wheat in the 1942 tests indicate that over 85% of the wheat farmers are still raising these varieties. Nebred, regarded as the best Turkey selection from the standpoint of baking quality, scored a rapid increase in the state and 6.1% of the 2000 farmers' samples collected for classification were this variety. In 1941, 3.5% of the farmers' samples of wheat were Nebred.

Rye mixtures throughout the state continue to be one of the principal hazards to high quality wheat. According to the classification of farmers' samples in the association's master nursery, 18% contained rye. Last year 17.4% of the farmers' samples contained rye. The increased planting of rye in the state for both hay and grain account for the greater amount of rye showing up this year. Certain areas of the state need to give the rye problem serious consideration if the wheat from these areas is not to be penalized.

For the first time in four years of testing farmers' samples of wheat by the Nebraska Grain Improvement Ass'n a few farmers' samples were found to contain stinking smut. The most badly smutted sample was one of Chiefkan. This variety is known to be very susceptible to this disease. If the presence of stinking smut indicates an upswing in this disease in Nebraska, Nebred will undoubtedly become very popular because of its resistance to stinking smut.

In some of the wheat tests the growth was extremely rank causing serious lodging. It was noteworthy that Cheyenne, the stiffest strawed variety of winter wheat was still standing when all other varieties went down. Blackhull suffered the greatest amount of injury from lodging. On the other hand, Blackhull, being earlier than most of the Turkey type wheats, escaped damage from army worms in the tests where this

pest caused injury. Pawnee was next to Cheyenne with respect to lodge resistance.

E. F. Frolik, Assistant Extension Agronomist and Secretary of the Nebraska Crop Improvement Association, reported at several meetings that there will be an abundance of certified seed available this fall. Much of this will again be distributed by local elevators.

As the 1942 grain improvement field meetings ended all agreed that the testing plan used by the Nebraska Grain Improvement Ass'n to locate the best seed available and to demonstrate the great need for using the best good seed has been effective. Plans are being made for the continuation of the 100 farmers' tests and the Pure Seed Plan in 1943.

## Recommended Winter Wheat Varieties

For 1942 the U. S. Dept. of Agriculture and state agricultural agencies have issued an up-to-date revision of the 1938 recommended winter wheat varieties for the western states.

For Nebraska the recommended varieties are Cheyenne, Nebred and Turkey.

For Kansas Blackhull, Kanred, Tenmarq, Turkey; and for semi-hard soft areas Clarkan and Kawvale.

For Colorado Kanred, Tenmarq, Nebred.

For Oklahoma Turkey, Tenmarq, Cheyenne, Blackhull. For the soft red winter areas of the state, Clarkan, Harvest Queen and Fulcaster.

For Texas Turkey, Tenmarq and Blackhull. In the soft red winter areas of Texas Red May, Mediterranean and Clarkan.

Duplicate copies of the chart for each state may be obtained from the state agricultural extension agencies.

## Increase Winter Legumes

With twice the 1941 supply of the principal winter legume seed in prospect for this year, the U. S. Department of Agriculture urges farmers in southern and middle Atlantic states to increase their seedings of winter legumes this fall as a means of maintaining the productive strength of their farmlands for war production. The seedings are needed to replace applications of nitrogen fertilizer that will be reduced this year because large quantities of nitrates are being used in munitions manufacture.

The Department estimates that the acreage of vetches, Austrian winter peas and crimson clover to be harvested for seed this summer will be about 424,000 acres, compared with 291,000 acres in 1941, and a five-year (1936-40) average of 123,000 acres. Present crop reports indicate that the seed production this year will be more than twice that of 1941.

## WEEDS and Weed Seeds

Your farmer patrons, yourself, in fact, everyone interested in the betterment of agriculture, will welcome this new book. Its 76 pages, 6x9, contain information, with illustrations of Noxious Weeds, Lawn Weeds, Poisonous Plants and aids dealers to identify noxious weed seeds. Nothing like it ever before published. Price \$1.00 plus postage.

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327 So. La Salle St. Chicago, Ill.



## The Positive Approach to Better Wheat

By C. E. SKIVER of Purdue before Kansas Board of Agriculture

The wheat growing area in Southwestern Indiana has been in production from 80 to 100 years. Incidentally, it has an average rainfall of about forty-three inches.

This makes it particularly adapted to the growing of soft red winter wheat of medium to weak gluten strength. Around this production of a particular gluten strength wheat there grew up a pastry flour industry, one of the principals of which is Igleheart Bros., of Evansville, makers of Swans Down Cake Flour.

During the long period over which this land had been used, some serious problems developed. Chief among these were —

1. A lowering of the fertility level to a point where another nature would not turn loose enough minerals to make a profitable crop each year.

2. A weed menace in the form of wild garlic. This was not a native plant, but was imported from Europe.

3. The morale of the growers became bad when no cure for these troubles was in evidence.

To correct the first and most serious of these ills—low yields—a clamor arose for higher yielding varieties, for that seems to be the easiest solution to this all-important problem and is usually one of the first ones resorted to, because we are all anxious to find the pot of gold at the end of the rainbow.

It would be safe to say that there were not over ten fields in the area that would have met these rigid requirements back in 1932 when we started the premium move. Last year in six counties we had eighty-seven growers with 90,840 estimated bushels.

At first the funds in the fellowship provided the inspection service free of charge. But we found that there was a tendency on the part of a few people to abuse this privilege by making application for acres that had no chance of passing, because as they said it didn't cost anything. This we took care of by requiring a fee of five cents per acre which kept the offenders out.

This to my knowledge is the first case on record where a grain buyer or processor offered a reward to growers for carrying out practices that were even more beneficial to the farmer than they were to the miller himself. As one of my good farmer friends put it, "He was getting paid for doing the things he should have been doing any way."

Just before each harvest season an invitation to join the move is sent to all grain buyers of the area. The name of each company that agrees to pay the premium is published in the papers and sent to each farmer having premium wheat. Each buyer is furnished a list of the names of growers meeting the field inspection which included the estimated yield. During the eight years that this plan has been in operation we have never had a single case of any buyer who ever refused to take any eligible wheat at the agreed premium.

This is not a new technique in the field of advertising, but I believe it is new in its application to crop improvement work. The point which we tried particularly hard to emphasize at all times was that this was a mutual problem of all concerned and that the farmers had even more at stake than the mills.

It wasn't very long before seed wheat began to move freely, for many of the growers found that instead of getting three cents a bushel premium they could get ten to twenty-five cents for their grain when sold as seed. Particularly was this so when their fields had been declared premium fields and publicized as such. Thus much of the premium wheat is sold as seed, although some growers still prefer to sell it as commercial grain.

I hope you will not forget that this inspection of fields was supervised by Purdue, our Agricultural University, and further that the standard which fields and samples must meet were

set up by our advisory committee, consisting entirely of farmers.

During the ten years that the premium wheat program has been in progress, 1,004,545 bushels of wheat have been eligible for premium. This means that over the last ten years we have premiumized an average of 100,000 bushels of grain each year, and this is about one-fourth of our average annual seed supply of 405,500 bushels required in the eight counties.

I have been talking to you in cold figures, but I wish it were possible to have you see the change in attitude of growers and buyers alike since this plan was evolved.

## Lespedeza Weed Control by Cleaning Seed

Several methods of cleaning dodder from lespedeza seed were tested by C. W. Veach in a continued study of weed control. Experiments on the vibrating decks were completed and the apparatus was discarded because it was not sufficiently efficient for commercial use.

In general it was possible to separate round seed, such as dodder, from seeds of other shapes by means of a vibrating deck, but purities of 99.9 per cent were obtained only with a loss of 75 per cent of the seed.

The vibrating deck resembles a miniature flight of long, broad stairs with shallow risers. It is set at such an angle that the steps are all tilted down toward one corner. The deck should be made of the smoothest materials possible, and the surfaces of the steps must be absolutely flat and lie true in their plane.

Important factors which influence the operation of a deck are the smoothness and flatness of the deck itself, the width of the steps and the length of the flight, the length and type of stroke, the number of vibrations a minute, and the inclination and side angle of the deck. As far as could be determined there was no advantage in rotating the plane about a center.

A method of cleaning dodder from lespedeza that is far better than using vibrating decks is to hull the lespedeza first and then clean the sample over a commercial dodder mill. It is necessary to use a fanning mill later to remove the hulls, but purities of 99.99 per cent are obtainable without excessive losses.

As there was no huller for lespedeza on the market, one was developed by C. W. Veach, Agricultural Engineering. Since this proved to be rather small, a larger one is being built. The original huller was made of two rubber surfaces. Seed was poured into the hopper at the

top of the machine. As the wheel turned at 1,700 revolutions a minute with a peripheral speed of 3,300 feet a minute, the seed was whirled between the two rubber surfaces removing the hull from the lespedeza seed and leaving it shining and black, while the smaller round dodder seed was unchanged. The dodder could then be removed by passing the seed over a commercial dodder mill. Power requirement was nearly proportional to the rate of hulling. Tests indicated that .4 horsepower was required to hull seed at the rate of 6 bushels an hour when 92 per cent of the hulls were removed. It is expected that the new huller will require only about half the amount of power used by the other huller because the path of travel for the seed is both wider and longer.

Analyses resulting from an investigation of vibrating screens for cleaning lespedeza indicate that there are advantages in operating screens at higher speeds and correspondingly shorter strokes.—Ill. Agr. Exp. Station.

## Disease-Resistant Spring Oats

Huron, a smut-resistant selection of midseason white oats originating from a Markton-Victory cross, recently distributed by the Michigan Agricultural Experiment Station, is meeting with much favor among Michigan farmers. Huron has high yield and high quality and is superior to the older standard varieties such as Wolverine and Victory in Michigan.

Vicland, a selection from a Victoria-Richland cross, which is highly resistant to both the smuts and rusts, has been outstanding in yield and quality in experiments in Wisconsin. It was distributed in 1941.

Upton and Marida are new smut-resistant, midseason, white oat varieties recently distributed in Utah and northern Idaho. Both are superior in yield and quality to the standard varieties.

Bridger, a selection from the cross between Markton and Victory, also smut resistant, is being increased for distribution by the Montana Agriculture Experiment Station. Bridger is superior in yield, quality, and stiffness of straw to Victory, the leading commercial variety of Montana.—E. C. Auchter, chief, Bureau of Plant Industry, U.S.D.A.

Limitations on production of grain bins imposed under General Limitation Order L-26 do not apply to bins made of wood, and contain no metal except for nails, strappings and small hardware.

## Rock Island Elevator, Chicago



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**HESS**

Oil Fired—Direct Heat

**DRIER and COOLER**

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CHICAGO, ILLINOIS



## Brome Grass Profitable in North Dakota

A grower in central North Dakota procured a cheap quarter of land, seeded with bromus, worked the sod up and in 1941, from 130 acres, harvested 28,000 lbs. of heavy, clean seed. The seed, however, was not free from quack grass and of course could not be certified, but nevertheless the crop sold for 8c per lb. and brought him \$2240.

No doubt had his field been eligible for certification and the seed of blue tag quality, he could have realized another 2c per pound. Evidence is constantly coming to the Seed Department of a demand for brome grass seed which is free from quack grass and certified.

Several years ago North Dakota exported bromus to Canada. Of late Canada has been shipping carloads of bromus to North Dakota and other states.—N. D. State Seed Dept.

## Federal Embargo on Grain Movement Ordered

The Interstate Commerce Commission has issued a federal embargo effective July 22 to control the tremendous flow of grain shipments now threatening congested terminal markets.

Practically all wheat centers have been using a permit system to control the flow of storage grain, but this plan has allowed a fairly free movement of free wheat and there was lack of uniformity between markets.

The Ass'n of American Railroads complained to J. E. Wells, special assistant to the sec'y of agriculture, that it could not legally cooperate in certain phases of the grain shipping control systems employed by the various markets, and asked revision of these systems. Railroads, said the complaint, cannot legally refuse to accept a car of grain from a shipper who can prove the cars would be unloaded promptly at destination, regardless of whether or not such shipper held a shipping permit. Use of private shipping permits made railroads guilty of "unjust and unlawful discrimination."

The federal order supplants existing market controls. Under this order I.C.C. representatives and agents thruout the nation will receive applications of shippers and receivers, and will issue the shipping permits. Voluntary com'tes in each market will keep I.C.C. representatives informed of available storage facilities.

The order applies to soybeans, flaxseed, grain screenings, and dry, edible beans, as well as bulk and sacked wheat, corn, oats, rye, and barley. It provides for setting up grain permit com'tes in the various markets, each to be composed of one representative of the U.S.D.A., and such representatives of producers, grain dealers, grain processors, and transportation interests as local needs require.

The Commission's Service Order No. 80 applies the I.C.C. shipping permit system to the movement of grain to Chicago, Buffalo, Omaha, Kansas City and the St. Louis and Twin Cities areas from July 22 to Dec. 31.

The order provides that no railroad shall supply or move a car to be loaded with grain, consigned or reconsigned to the designated market except on permit.

I.C.C. agents will cooperate with a market's com'te composed of J. S. Brown, at Chicago; E. B. Black, at Buffalo; F. P. Manchester, at Omaha; G. A. Johnson, at Kansas City; M. B. McCormick, at St. Louis, and E. J. Grimes, at Minneapolis.

Poor crop conditions and an extreme scarcity of red winter wheat in the Kansas City territory, led G. A. Johnson, the Kansas City permit agent, to raise promptly the embargo on shipments of cash red wheat to that market for sale.

His order, effective July 22, the effective date of the I.C.C. order, covers the following described territory:

All points in Missouri except St. Joseph.

All points in the following counties of Kansas: Doniphan, Atchison, Leavenworth, Jeffer-

son, Wyandotte, Douglas, Johnson, Franklin, Miami, Anderson, Linn, Allen, Bourbon, Neosho, Crawford, Labette, Cherokee, Brown, Nemaha, Jackson, Shawnee, Osage, Coffey, Woodson, Wilson, Montgomery, except Atchison, Leavenworth and Topeka, Kas.

All points in the state of Oklahoma on and east of the main line of the A. T. & S. F. Ry. through Ponca City, Guthrie and Purcell.

Any storage wheat from the above described territory, regardless of variety or class, is still subject to permit.

## O.D.T. Cancels Return Load Truck Order

Office of Defense Transportation has ordered far reaching modifications in its truck orders 3, 4, 5, and 6, certain provisions of which had been postponed to July 15. The modifications are summarized by the American Feed Manufacturers Ass'n as follows:

"ODT Order No. 6 covering local delivery carrier is canceled. The requirement in ODT Order No. 5 for a 75 per cent return load is also canceled. There must be a 100 per cent outbound load and this 100 per cent requirement applies in either direction; that is, a 100 per cent outbound load with no return load requirement or an empty outbound movement with a 100 per cent return load. Truck mileage must be reduced 25 per cent under the truck mileage for the corresponding month of 1941; if your truck traveled 1,000 miles in July, August, or any other month of 1941, that mileage for the corresponding month of 1942 must be reduced to 750 miles. A requirement of a 40-mile speed limit is provided and this speed limit will be strictly enforced."

Revised regulations are effective Aug. 1. They require truck operators to consult information stations or other carriers in an effort to develop return loads and make maximum use of facilities.

Truckers are asked to set up joint information offices in principal cities, the expense of such offices to be borne by the truckers, and the offices to be under supervision of a 9-member governing com'te to be established by ODT in each state.

Truck drivers are required to exercise "due diligence" to develop return loads, and will be allowed to return empty only if granted a "clearance" permit from the information office.

Chicago, Ill.—W-439, Marine Transit Co., by Examiner John A. Russell, proposes granting a certificate to continue operation of barges between St. Louis and Chicago, over the inland waterways.

Carriers, respondents to No. 17,000, part 7, investigation of grain rates in the Western District, have asked the I.C.C. to permit them to continue current rates on whole corn and whole oats for another year to July 31, 1943. Current rates were published to meet unregulated truck competition, Iowa and Minnesota points to points in Wisconsin. Crop conditions, say the carriers, make continuation of this rate-cutting experiment advisable.

## Grain Carriers

Class I railroads had on order on July 1, this year, 16,023 box cars.

Illinois railroads have filed revised rates on grain and grain products, effective Aug. 1, with the I. C. C.

Requisitioning of lake package freight boats by the government will affect the movement of grain to some extent, as the package freighters sometimes carried grain.

In the first half of this year the railroads have performed the greatest amount of freight service ever performed in any corresponding six months in their history.

Grain and grain products loading totaled 53,509 cars, during the week ended July 11; an increase of 11,169 cars above the preceding week, but a decrease of 9,186 cars below the corresponding week in 1941.—Ass'n of American Railroads.

Chicago & Eastern Illinois railroad's Supplement 14 to Tariff 605, Supplement 21 to Ill. C. C. No. 352, effective Aug. 8, provides a change in rate in connection with rate on grain from Kimmunity-Mt. Vernon to Decatur, Ill.; and increases the rate from Livingston to East St. Louis, Ill.

Railway statistics for April indicate that month recorded a new high in railway operating efficiency, reports *Railway Age*. Volume of freight handled totaled almost 54,000,000,000 net ton-miles, compared with 51,000,000,000 at the 1941 peak last October. Daily averages were 101.5 miles for each locomotive, 46.6 miles for each freight car. Trains averaged 52.4 cars, carrying 1,006 tons of freight.

Washington, D. C.—A tie vote in the Senate was broken when Vice President Henry A. Wallace voted in favor of pending legislation that included \$44,000,000 for a Florida Barge Canal, \$49,000,000 for construction of pipelines and enlargement of intercoastal waterways. The canal would be 12 ft. deep, 125 ft. wide, cut across northern Florida to save barges necessity for going around the tip of the peninsular state.

Chicago, Ill.—The 59th annual convention of the Mid-West Shippers Advisory Board opened in the Palmer House July 9. Lawrence Farlow, sec'y of the Farmers Grain Dealers Ass'n of Illinois and chairman of the grain com'te, and A. H. Schwieter, traffic director of the Chicago Ass'n of Commerce, discussed plans for controlling the 1942 grain movement to make full use of available box cars.

A corn grind of 9,767,762 bus. during June, for domestic purposes, is reported by the Corn Industries Research Foundation, against 8,569,750 in June, 1941.

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## Feedstuffs

**Kansas City, Mo.**—Dehydrators of alfalfa are operating day and night to catch up with orders for meal. The demand has increased thru vitamin A requirements being diverted from fish oil to alfalfa.

**Washington, D. C.**—The U. S. D. A. reports the production during June of 31,800 tons of distillers dried grains and 14,100 tons of brewers dried grains, against 16,300 tons and 11,400 tons respectively in June, 1941.

**Washington, D. C.**—Dry skim milk production during May was 31 per cent larger than in May, 1941; but the portion used for animal feed decreased to 55 per cent less than in May, 1941, as reported by the U. S. D. A. Total production for food and feed was 82,000,000 lbs., against 62,500,000 lbs. in May, 1941.

**Harrisburg, Pa.**—The Pennsylvania Millers & Feed Dealers Ass'n in annual convention here recently, pledged united co-operation with the war effort. H. A. Menchey, Lancaster, was re-elected pres.; other officers re-elected are: S. H. Rogers, Washington, vice-pres.; S. P. F. Kline, Boonsboro, Md., vice-pres.; E. J. Eshelman, Lancaster, treas.

**Houston, Tex.**—The Houston Milling Co. has agreed with the Federal Trade Commission to cease representing that use of Arrow Turkey Growing Mash or Arrow Sure Shot Growing Mash will result in more eggs or greater profit, without limiting such basis of comparison to natural as distinguished from other prepared feeds; that use of Arrow Horse and Mule Feed enables animals to do more work at lower feeding cost; and that the addition of cereal grass to Arrow Feeds gives results that are not possible with many feeds containing no cereal grass.

### Pigs Require Potassium

Under the conditions of an experiment by Hughes and Ittner of the California Agri. Exp. Sta. the requirement of potassium chloride for the young pig lies between 2.25 gm. and 4.5 gm. per 100 pounds of pig daily. In terms of potassium this amounts to 1.18 gm. and 2.35 gm. respectively, and as percentage of the diet it amounts to 0.08 and 0.15 per cent.

Since 1.18 gm. of potassium per 100 pounds of pig daily or 0.08 per cent of the diet was not sufficient, 2.36 gm. per hundredweight of pig daily or 0.15 per cent of the diet is considered the minimum requirement for young growing pigs.

### Peanuts and Soft Pork

A study by gross and histopathology of selected foci from the carcasses of 8,324 peanut-fattened hogs by M. Pinson Neal and reported in the Southern Medical Journal, revealed a uniform softness of the meat and the presence of the kidney worm, *Stephanurus dentatus*, but showed only 3 instances of perirenal fat necrosis and 2 of pancreatic fat necrosis; the latter is attributed to the presence of *Stephanurus dentatus* in the pancreas or pancreatic duct.

Under the conditions of fattening, marketing and slaughtering of hogs here met, fat necrosis is not produced by the feeding of the lipase-containing peanut.

The gross fat necrosis, reported by Horvath and Chang (Chemical Abstracts 20: 3488), and soft pork are produced by the same food, untreated vegetable seeds, all rich in fat and containing lipase; both conditions are apparently prevented by cooking such food elements. Interpretations of fat necrosis not based on histological studies to eliminate parasitic and other inflammatory foci are not dependable.

### Missouri Feed Conference

Nearly 100 Missouri feed manufacturers' representatives, feed control officials, and college feed authorities met at Jefferson City, July 13 to discuss feed problems.

H. D. ELIJAH, administrator of Missouri's feed law, suggested setting up a state feed ass'n and asked numerous questions implying need for improvement in the Missouri feed law. Some of these were:

Do present rules for declaring protein, fiber, fat and N.F.E., and the branding rules, protect the feeder?

Can a feed manufacturer make good or poor feeds under the present laws, and under the same analysis, depending upon how he uses ingredients?

Should the office of livestock and feed administration be subject to political change?

Must there be an allowance for 6 per cent of inert matter in a feed?

Should there be minimums for vitamins when claims are made for them in a feed?

Should all screenings be ground?

Should all feed sold be registered?

Feed manufacturers appointed an advisory com'te to work with Mr. Elijah, with E. B. Johnson, St. Louis, as chairman, and Lewis E. Selders, Kansas City; Henderson Wilcox, Moberly; E. A. Fallin, Springfield, and A. H. Meinershagen, sec'y of the Missouri Grain, Feed and Millers Ass'n, Higginsville, as members.

This com'te promptly recommended that minimum protein for a dairy feed be limited to 12 per cent, any smaller volume to be recognized as "roughage" or some term not implying milk production.

Recommendations from the floor urged Mr. Elijah to follow closely recommendations set up by the Ass'n of American Feed Control Officials. Mr. Elijah, however, insisted Missouri's peculiar problems urged setting up of a state ass'n and discussion centered around his proposal.

Leading speakers appearing on the program ahead of Mr. Elijah were:

J. W. BURCH, director of the extension department of the university, who pleaded for co-operation between manufacturers, state department and the college. He said feed manufacturers should educate farmers to feed better.

L. A. WEAVER, professor of animal husbandry, urged taking advantage of market shifts among protein and carbohydrate feeds.

DR. A. G. HOGAN illustrated his talk about vitamins, claiming that poultry is the only branch of farm livestock which must have its vitamins carefully provided.

### Value of Feed Rests on Combination of Digestible Nutrients

In steer Shorthorn calves the metabolizable energy in four specially designed experimental rations was equally well utilized for maintenance and for body increase. The rations were composed of combinations of different feeds, no one feed occurring in more than one ration, and were so designed both to contain similar proportions of the various classes of nutrients distinguished by chemical analysis, and to be adequate in all essential nutrients.

The results lend support to the hypothesis that the extent to which metabolizable energy is utilized for maintenance and tissue synthesis is not a function of the particular feeds included in the ration, but is dependent on the adequacy of the combination of digestible nutrients thus presented to the tissues in covering their demands for nutriment.—*Journal of Nutrition*.



# Poultry Feeds and Feeding

**New York, N. Y.**—The British Library of Information has obtained from England a supply of copies of a pamphlet on "War Time Poultry Feeding" prepared by the Ministry of Agriculture and Fisheries, and containing valuable hints to poultry keepers who desire to produce more to aid in the war effort.

**Poultry never get enough** of the insect diet they thrive upon. Swiss farmers, however, are reported by the New York Times to have provided a delightful feast for the birds by collecting cockchafers, roasting them and grinding them into meal. The cockchafer is a large beetle very destructive to vegetation in Switzerland and France, the larva living on roots and the adult on foliage.

**South Bend, Wash.**—Pacific oyster shell, which a few years ago was a "waste" product, being used for road fills or dumped along the waterfront, is now in sufficient demand that it will be hauled nearly 50 miles for processing here. Some 18 tons of medium shell (used for poultry feed) about 12 tons of shell flour (used as an ingredient in dairy and poultry mashes and for fertilizer) per day, with five men employed in the plant.—F. K. H.

**Lafayette, Ind.**—With war emergency demanding efficient production and prevention of waste, poultrymen need to be aware of the tremendous drain that is being made on their industry by the widespread use of remedies and drugs of little effectiveness in the treatment of poultry ailments, warns Joe W. Sicer, Purdue University extension poultryman. It is reliably estimated that between 10 and 15 million dollars are spent annually on drugs and remedies for poultry other than for biologics of recognized value. Much of this is for worm capsules and the so-called intestinal antiseptics. "Good results are much more certain if poultry raisers will control diseases and parasites through preventive measures."

## Distillery Residue Not a Good Protein Supplement

Two-year trials show that dried distillery residue makes a poor quality protein supplement in the rations of growing chicks.

A brand of distillery residue even failed to equal soybean oilmeal, where each of the products to be tested was fed to growing chicks in equal quantities.

To be sure it is possible to concoct a tolerably good ration containing this residue, but work here indicates the only way to do this is to feed it with at least an equal amount of milk, meat scraps or fish meal.

Chicks grew fairly well on a ration containing 8 lbs. meat scrap and 8 of residue as the protein supplement in 100 lbs. of ration. Likewise results were acceptable when the supplement was meat scrap 4, dried milk 4, and residue 8. Growth was slow when the supplement was meat scrap 2, dried milk 2, and residue 12.

It is of special interest to note that equal parts of meat scrap and soybean oilmeal gave slightly better results than equal parts of meat scrap and residue. Chicks grew still faster on equal parts of meat scrap and dried milk, or with meat scrap 2, dried milk 2, and soybean oilmeal 12.

Since the residue certainly does not equal the more expensive protein supplements, and costs more than soybean oilmeal without giving better results to say the least, it would seem difficult to justify its use as a protein supplement in chick rations. Materials of this type will probably find their places in poultry feeding as vitamin carriers rather than as sources of good protein.

W. W. Cravens, J. G. Halpin and C. E. Holmes conducted this investigation at the Wisc. Exp. Sta.

## Protein Requirements of Chickens

The fact is demonstrated by the New Hampshire Agr. Exp. Sta. in Bulletin 335, that the protein requirements of cage managed birds as reported in this bulletin are somewhat different than for floor managed birds, especially in the use of dried skimmilk. This concentrate gave better results when fed to floor managed birds than when fed to cage managed birds.

Protein levels of approximately 19% produced the greatest gains in weight during the initial 12-week brooding period of this experimental study.

The results reported appear to justify the conclusions that for floor managed birds a mixture of the three animal protein sources in the ration is more desirable from the standpoint of growth, efficiency of feed utilization, production and hatchability of eggs than is the use of but one animal protein concentrate.

The per cent of or type of animal protein concentrate fed has but little influence on the date of sexual maturity or on egg size.

Evidence is presented to indicate that the type and amount of animal protein concentrate fed to breeding birds has an influence in the control of gizzard lesions in their resulting progeny.

## Constituents of Poultry Feeds

By Prof. R. V. BOUCHER before feed dealers and manufacturers at State College, Pa.

**DRY SKIMMILK.**—We have just completed a study of dry skimmilk which consisted of three experiments, each of 72 weeks' duration, with Single Comb White Leghorns. We did this work because we felt that, although qualitative results have been reported from time to time, there are few records of attempts to determine the most efficient quantity of dry skimmilk to use in the poultry ration. From a practical standpoint, it seemed desirable to have information regarding the approximate amount of dry skimmilk to use with meat and fish protein concentrates for best results thruout the growing, laying and breeding periods.

The all-mash basal ration was formulated with the idea that it should meet all known nutritive requirements and that the constituents should conform to best present-day commercial practice in this area, except that it should contain no milk products. Thus, the no-milk basal ration was designed to reveal whether or not the addition of dry skimmilk would improve an already high-grade ration. Along with this basal ration we fed seven other groups on varying levels of milk—from 1¼ to 8¾ per cent.

The results of this three and a half year study indicate that:

Maximum benefits from the use of dry skimmilk in all-mash rations during the growing period were attained during the first ten weeks of growth.

Most efficient gains in body weight on the basis of dry skimmilk intake were made by chicks fed 1.25 and 2.5 per cent dry skimmilk in all-mash rations.

From the standpoint of egg production, egg weight, hatchability and dry skimmilk intake, most efficient performance by laying pullets occurred with all-mash rations containing 2.5 to 5 per cent milk. Results were essentially as satisfactory with 2.5 and 3.75 per cent milk as with higher levels.

Mortality of the second generation on all-mash rations containing none to 5 per cent dry skimmilk was considerably higher during the laying period than on rations with 6.25 to 8.75 per cent milk.

Rate of growth during the first two weeks of age, total feed consumption and gain in weight during the growing period, feed efficiency during the early part of the growing period, body weight at sexual maturity and per cent

hatch of fertile eggs increased with increasing percentages of dry skimmilk in the all-mash rations. Age at sexual maturity decreased with increasing amounts of milk in the ration.

It should be emphasized that this work was done with all-mash rations and that the figures must be doubled to apply to a mash intended to be fed on the basis of equal parts mash and scratch grain.

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## What Kind of Poultry Rations in War-Time

With dried milk now largely used for human food—and even meat scraps rather scarce and expensive—poultrymen will be wise to rely on soybean oilmeal for much of the protein supplement in poultry mashes, say J. G. Halpin and W. W. Cravens.

Trials at the Wisconsin Station have shown, however, that soybean oilmeal must be used in carefully-planned rations if it is to give good results. With the government calling for more poultry and eggs, and prices good, it would be a serious mistake to "economize" with soybean oilmeal to such an extent as to get inferior production.

The only known situation in which it is fairly safe to depend on soybean oilmeal for all the protein supplement is where laying hens run on good summer pasture, or else get fresh lawn clippings. Green grass helps supply some of the factors which soybean oilmeal lacks. High-quality alfalfa leaf meal as 5% of the mash is a fairly good substitute for green grass, and it is wise to use it whenever the birds do not have grass. In addition it is a good plan to feed leafy alfalfa hay in racks.

For chicks and for laying hens whose eggs are to be used for hatching, as well as in most cases for other laying hens, the only satisfactory plan is to use at least a little protein that comes from animal sources, such as milk or a combination of meat scraps and fish meal.

In 1942 the most practical protein combination is one made up principally or entirely of soybean oilmeal, meat scraps and fish meal. Recent trials by Halpin and Cravens show that fish meal "teams" especially well with soybean oilmeal to make up the latter's deficiencies.

As for the proportions of the protein supplements to use, good all-around poultry mash can be made with equal parts of soybean oilmeal, meat scraps and fish meal. It is also possible to make a cheaper mash by using as much soybean oilmeal as the other two together.

For growing chicks, for example, a satisfactory supplement is 8 lbs. soybean oilmeal, 4 of meat scraps and 4 of fish meal in each 100 of mash.

Whereas a total of 16 parts of protein supplement in 100 of mash is enough for chicks, laying hens do better with 18 or 20, since they eat grain of relatively low protein content in addition to the mash. Broilers, capons or cockerels to be sold for meat also need 20. For such birds the protein combination may be soybean oilmeal 10, meat scraps 5 and fish meal 5.

Although in general dried milk is too expensive for poultry feeding in 1942, nevertheless if it can be obtained it may be desirable to use 2% of it to replace an equal amount of other protein feed in the rations of chicks less than four weeks old, and possibly also in the rations of breeding hens. Such a small amount of milk will not increase the cost of rations beyond reason. The milk generally makes a worthwhile difference in the thrift of young chicks as well as in the hatchability of eggs which breeding hens produce.

It is highly important, of course, to use the protein supplement in a ration which is good in other respects. Here is a good chick ration, the Wisconsin No. 44W, which can be converted into an excellent ration for laying hens by increasing the protein supplements to 18 or 20 parts instead of 16, by increasing the salt to 1%, and by feeding whole grain along with this mash:

Ground yellow corn.....	45 lbs.
Wheat bran.....	15
Wheat middlings.....	15
Alfalfa leaf meal.....	5
Meat scrap.....	4
Fish meal.....	4
Soybean oilmeal.....	8
Limestone grit.....	1.5
Flint or granite grit.....	1.5
Iodized stock salt.....	0.5
Cod liver oil.....	0.5

## Indiana Poultry Handbook

A handy, pocket-size bulletin, filled with information essential to any raiser of chickens, has been published by the Purdue University Agricultural Extension Service. It is entitled, Extension Bulletin No. 274, "Purdue Poultry Pointers," prepared by Scott Hinners, extension poultryman.

The 20-page bulletin, which is available from the office of any Indiana county agricultural agent or from Purdue at Lafayette, contains facts on seasonal egg production, suitable poultry houses and equipment, all-mash starting rations, growing rations, and laying rations, winter egg-laying pause, and disease and parasite control.

## New Feed Trade Marks

NATIONAL OATS CO., Cedar Rapids, Ia. No. 452,865. "Trix," for dog food.

MUTUAL PRODUCTS CO., Minneapolis, Minn. No. 450,770. "Mutual," for stock food and calf pellets containing milk.

KELLOGG CO., Battle Creek, Mich. No. 449,993, "Gro-Cat" and No. 449,994, "Gro-Kit," for feeds for carnivorous animals.

GENERAL MILLS, INC., Minneapolis, Minn. No. 445,847. "Surefox," for food for carnivorous animals, particularly fox food.

LOOSE-WILES BISCUIT CO., Long Island City, L. I. No. 452,326. "Austin's," for food for domesticated carnivorous animals.

PRATT FOOD CO., Philadelphia, Pa. No. 439,664. "Vital-trate," for a feed ingredient or supplement for inclusion in animal and poultry feeds.

SCHENLEY DISTILLERIES, INC., New York, N. Y. No. 451,760. "Soludri," for distillers dried corn solubles for cattle feed and/or an ingredient thereof.

MUTUAL PRODUCTS CO., Minneapolis, Minn. No. 451,773. "Dairyade," for stock food containing milk ingredients. The trade mark is in script lettering.

PETRUS JACOBUS GEERLINGS, doing business as Geerlings Feed Mills, Marshalltown, Ia. No. 447,940. "Hi-Brid," in capital letters, for livestock and poultry feed.

THE QUAKER OATS CO., Chicago, Ill. No. 449,805. Representation of a pair of fighting cocks and the customary "Ful-O-Pep" trade name, for stock and poultry feeds.

G. FRED OBRECHT, doing business as National Foods, Baltimore, Md., and New York, N. Y. No. 448,981. "Flaymalt" in block letters that appear to be standing on a board, for poultry feed.

GAINES FOOD CO., INC., Sherburne, N. Y. No. 449,834. "Gaines Dog Meal" in outline lettering against a square background set at an angle, and a representation of a running dog, for dog food.

CLEMENT GRAIN CO., Waco, Tex. No. 441,559. "Polkadot" in outline lettering against an attractive background, for hog and poultry feed supplements, horse and mule feeds, and stock and poultry feeds.

H. EARL DELAPP, doing business as Delapp & Co., Waseca, Minn. No. 446,076. "The Farmade Way," in a fanciful design enclosing the "m" in a circle, and placing 3 lines below the first part of the word, and 3 lines above the last part, for cattle and poultry feed..

G. FRED OBRECHT, doing business as Gerard Milk Products Co., Baltimore, Md. No. 446,175. A trade mark involving the words "Fortified Milk-Tone, Milk Plus Vitamins A-B-C-D-E-G and Minerals," in an attractive arrangement, and the name and address of the manufacturing company, for poultry feed.

Some distillers running, or about to start operations on production of low proof alcohol for the War Production Board, and who have to take their grain from Commodity Credit Corporation, have received instructions to increase wheat content of mash from 10 to 30 per cent.—A. W. W.


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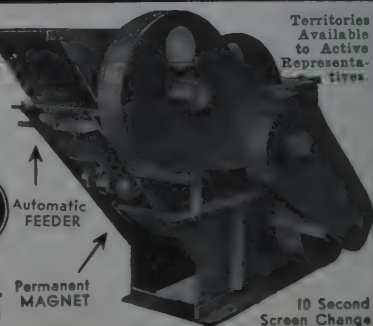
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## Old Steel Bin Government Corn Loses Vitamin A

At Iowa State College five lots of 56 yearlings steers were fed a ration of shelled corn, linseed oilmeal, minerals, alfalfa hay and salt. The rations of the steers differed only in the age of the corn. Lot I got 1937 corn, Lot II 1938 corn, Lot III 1939 corn, Lot IV 1940 corn and Lot V 1941 corn. The gains of the five lots were close, varying from 1.97 pounds per day for the steers of Lot IV (1940 corn) to 2.20 pounds per day for each steer of Lot I (1937 corn). The corn was obtained from government steel bins and was purchased from the Commodity Credit Corporation.

The steers liked the old corn as well as the new, as measured by the amount they ate. The steers were hand-fed the shelled corn twice daily, allowing them all they would eat.

Tests on the corn of the different years showed that the vitamin A content of the 1941 corn was more than twice that of the 1937, 1938 and 1939 corn and slightly more than that of the 1940. It appeared that after the corn was about 2 to 3 years old, there was no further drop in the vitamin content.

Results from other experiments and of some Iowa feeders have indicated that older corn doesn't give quite as good results as newer corn. C. C. Culbertson, who is in charge of the feeding tests at the Iowa Station, believes that the difference found in these tests may have been caused by the loss of vitamin A and the failure to provide it from some other source.

## Growing Sheep with Amide Flakes

W. Lenkeit and M. Schleinitz report on feeding experiments on growing sheep with amide flakes. Three groups of lambs were given rations similar except for the source of a protein supplement. All the rations included hay, oats, clover, sugar beet, potato flakes and barley. Group I obtained the required protein supplement in the form of yeast and soya bean meal, Group II from urea incorporated in the potato flakes and Group III received potato flakes without urea.

Group I gained 24.93 kilograms, Group II 19.75 kg. and Group III 16.75 kg. in 18 weeks. These results are not believed to be conclusive proof that nitrogen from urea can be utilized for growth.

## Vitamin Stabilizing Means Patented

Sidney Musher, New York, N. Y., has taken out a number of patents applying to stabilization of food compositions, and vitamins, according to the published records of the U. S. Patent Office. These patents have been assigned to the Musher Foundation, Inc., of New York City. Applying to the animal and poultry food industries are:

**No. 2,282,786.** Stabilization of Animal Meals. A method of stabilizing the vitamin A and fatty and protein content of a meal selected from the group consisting of meat meal and fish meal against oxidative deterioration, which comprises dispersing the meal in finely divided form thru a large body of molasses.

**No. 2,282,791.** Stabilization of Fish and Similar Oils. A method of stabilizing cod liver oils containing their normal complements of protein and phosphatide bodies removed with the rendering of the cod liver oils which comprises subjecting such oils to a dry heat treatment of at least about 250 degrees F. and not in excess of about 375 degrees F. whereby enhanced stabilization against rancidity and oxidative deterioration is obtained. Included is a method of producing a highly stable vitamin concentrate, by heating crude vitamin bearing fish oils to the same temperatures under an inert gas, then removing the unsaponifiable fraction.

**No. 2,282,795.** Vitamin Product. A method of extracting a stable vitamin containing oil from dehydrated animal livers which comprises

grinding said livers in low moisture condition with an oil selected from the group consisting of glyceride oils and mineral oil to form an oily viscous paste containing in excess of about 30% total solids other than oil and until the oil has been extracted from said dehydrated livers and then expressing the oil from the solids, whereby there is produced a high quality and highly stable oil. The same method is applied to extraction of vitamins from fodder and forage legumes, and from cereal germs, in Nos. 2,282,796, and 2,282,797.

## Commercial Feed Trade in Minnesota

H. A. Halvorson, chemist in charge of the Minnesota division of feed and fertilizer control, reports that 414,075 tons of commercial feed (having an estimated value of \$18,074,321) were sold for feeding livestock and poultry in Minnesota in 1941. This represents by far the largest amount of commercially-mixed and by-product feeds ever sold for consumption in this state in one year. Compared with 1940 the current utilization amounts to an increase of about 48 per cent in tonnage and about 55 per cent in wholesale value. The previous record year for tonnage was 1936 when 337,504 tons were sold, and the previous record year for monetary value was 1937 when sales amounted to \$13,585,540.

Accompanying this expansion in the commercial feed business, we find a large increase in number of registrations filed and number of companies mixing feeds, which is not necessarily the result of the greater consumption. The turn toward decentralization in manufacture of finished rations has been noted in previous bulletins, and tabulations have been presented to show this trend.

Unsettled trade conditions caused by the war are vividly illustrated by the change in types of vitamin D supplement available now compared with those of several years ago. For example, only two samples of cod-liver oil and one sample of fortified cod-liver oil were drawn for analysis in 1941 in contrast with 30 samples of the same class of oils in 1939. Restricted imports of cod-liver oil over the last few years have stimulated investigations, which have led to the commercial production of materials answering all requirements of a satisfactory source of vitamin D for poultry. The most important of these new substances at present are D activated animal sterol, vitamin A and D feeding oil, vitamin D feeding oil, and sardine oil.

Estimated Tonnage of Commercial Feedstuffs Sold for Consumption in Minnesota			
Kind of Feed	1931	1940	1941
Alfalfa Meals	204	987	3,143
Animal By-Products	17,933	23,594	41,672
Mixed Feed Barley and Barley By-Products	95	.....	209
Calf Meals	306	828	972
Condimental Feeds	412	154	142
Corn Feed and Hominy Meal	1,378	188	279
Corn Gluten Feeds and Meals	729	642	601
Corn and Oats Feeds (Mixed)	5,879	3,150	1,848
Cottonseed Meals	1,041	645	370
Dried Beet Pulp	2,384	2,378	2,129
Linseed Meal	7,251	11,556	14,068
Milk Products	.....	1,242	1,155
Mineral Mixture Feeds	5,459	8,310	14,464
Miscellaneous Feeds	2,575	6,607	21,913
Scratch Feeds and Mis- cellaneous Poultry Mashes	53,082	14,306	19,521
Chick Starting and Grow- ing Mash	.....	26,835	49,187
Egg and Laying Mash	.....	25,081	33,183
Turkey Mash	.....	11,369	20,466
Poultry Mash Concen- trates	.....	15,134	49,628
Proprietary Feeds with Molasses	17,433	14,772	15,894
Proprietary Feeds with- out Molasses	9,059	5,248	11,755
Proprietary Feed Con- centrates	.....	2,770	11,239
Rye Mill By-Products	1,751	383	405
Screenings, Ground	3,607	3,059	1,815
Wheat Bran	59,363	39,720	37,687
Wheat Standard Mid- dlings	42,234	45,094	44,231
Wheat Flour Middlings	17,639	6,464	7,247
Wheat Red Dog Flour and Low Grade	3,398	5,054	5,591
Wheat Mixed Feeds	5,414	4,475	3,761
Total	258,626	280,045	414,075

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# Use of Soybean Oil Meal

By K. J. MALTAS of A. E. Staley Mfg. Co.

To meet production goals on pork this year there will be required about 86,000,000 hogs weighing 230 lbs. each. It will take about 14,000,000 brood sows farrowing six pigs per litter to produce this number of slaughter hogs. If six bushels of corn and 45 lbs. of protein concentrates are required to produce 100 lbs. of pork, it appears that something over 4,000,000 tons of protein concentrates would be needed to supplement the grain for the slaughter hogs, and the brood sows would probably require another million tons of protein concentrates, if we were to do the best possible job of feeding.

To feed around 400,000,000 chickens in farm flocks—that is, laying flocks—and approximately 1,000,000,000 slaughter birds, it appears that another 3,000,000 tons of protein concentrates would be required for this purpose. This would mean a total of around 8,000,000 tons of protein concentrates required to do a maximum job of feeding our hogs and chickens in the United States.

Since there will be less than a million tons of animal protein concentrates available for feeding to hogs and chickens, it appears that the entire estimated production of soybean oil meal for the coming season could be best utilized entirely for feeding to our hogs and chickens and still fall short of filling the protein tonnage requirements for these two classes of livestock.

Since a very considerable portion of our total shortage in protein concentrates appear to fall in the fields of poultry and hog feeding and since soybean oil meal gives especially good results when used for these two classes of livestock, it appears that feed manufacturers should considerably increase the percentage of soybean oilmeal in hog and poultry rations. Sufficient meat proteins just won't be available. Relatively high percentages of the protein supplied by the protein concentrate portion of a feed or ration can be derived from soybean oil meal if provisions are made to supply necessary vitamins and minerals from other sources.

Soybean oil meal is as good a source of vitamin and minerals as most plant protein concentrates, but the value of meat scraps, tankage, fish meal, and dried milk, although considered primarily as protein concentrates, is, in part due to the minerals and vitamins they supply. The amount of soybean oil meal that can be used in poultry rations is indicated in the following statements from various experiment stations:

**POULTRY:** Sloan, of Illinois, reports soybean oil meal as a good protein supplement for poultry, and states that when supplemented with sufficient minerals is about equal per unit of protein with meat scraps and fish meal and somewhat better than tankage, gluten feed, cottonseed meal and not quite so good as dry milk products. He reports the feeding of ground soybeans not as satisfactory as the feeding of soybean oil meal. He also states that soybean oil meal has an advantage over some other vegetable protein supplements in apparently not affecting the yolk color of eggs.

The Wisconsin Station reports "because soybean oil meal is about the best of the plant protein feeds, it has during recent years become popular as a substitute for milk and meat scraps in poultry rations. Research at this station has shown that good soybean oil meal serves very well for this purpose as long as it is used to replace only part of the animal protein."

Wisconsin reports further, "The combination of 12 parts high temperature soybean oil meal, 2 parts of meat scraps, and two parts of dried milk plus minerals, surpassed 16 parts of soybean oil meal, plus mineral, and approximately equaled the combination of 8 parts soybean oil meal, 4 parts meat scraps and 4 parts dried milk,

plus minerals. It also approximately equaled the all animal protein supplement consisting of 8 parts meat scraps and 8 parts dried milk, in weight of pullets and feed required per unit of gain at 20 weeks in two feeding trials. This combination of 12 parts high temperature soybean oil meal, 2 parts meat scraps, and 2 parts dried milk, plus minerals also proved highly efficient in comparison to other supplements tested in producing eggs in one 11-month trial reported for pullets."

Hunter, Marble, and Kandel of the Pennsylvania Station, studying vegetable proteins in turkey feeding, found that they could use as much as 14% of soybean oil meal in turkey rations replacing a portion of protein from meat scraps, fish meal, and milk and obtain as good growth as when all animal products were used.

In experiments recently completed by Irwin and Kempster at the Missouri Station it was found that rations containing 20% soybean oil meal, 5% meat scrap, and 5% dried buttermilk, gave excellent results for broilers, as did rations containing 25% soybean oil meal and 2% meat scrap.

**FOR HOG FEEDING,** Experiment Stations report as follows:

Morrison in his "Feeds and Feeding" summarizes six feeding trials with pigs comparing tankage and soybean oil meal. He states "No matter whether the pigs were self-fed, free choice, or hand fed, the gains were nearly as rapid on soybean oil meal as on tankage. In these trials 100 lbs. of soybean oil meal replaced on the average 83 lbs. of tankage and 22 lbs. of corn."

At the Illinois Station, Carroll, Mitchell, Hamilton and Garrigus compared a ration containing 8% tankage, plus 4% linseed meal against a ration containing 14% soybean oil meal. Both rations contained equivalent amounts of protein. The pigs on the soybean oil meal ration gained 1.6 lbs. daily as against a daily gain of 1.5 lbs. on the tankage linseed ration, and required slightly less feed for 100 lbs. of gain.

Purdue has developed some hog supplements that have been highly satisfactory. Three of their most satisfactory ones were called supplement 2, 5, and 7, in their 1939 trials.

They were composed of the following products:

Supplement 2: meat and bone scraps, 40%; soybean oil meal, 50%; alfalfa leaf meal, 10%.

Supplement 5: Meat and bone scraps, 20%; Menhaden fish meal, 20%; soybean oil meal, 40%; cottonseed meal, 10%; alfalfa leaf meal, 10%.

Supplement 7: Meat and bone scraps, 20%; Menhaden fish meal, 10%; dried skim milk, 10%; soybean oil meal, 40%; cottonseed meal, 10%; alfalfa meal leaf, 10%.

During a 90-day trial, pigs made an average daily gain of 1.68; 1.72; and 1.81 lbs., respectively, on supplements 2, 5, and 7.

Robison of the Ohio Station states that very satisfactory hog supplement can be made up, using 36% to 48% of soybean oil meal. Another most interesting factor pointed out by Professor Robison is that feed men are finding that samples of corn do not contain as much protein as in former years. Indiana hog feeding reports for 1939 and 1940 show that the hybrid corns fed range from 7.8 to 8.7 per cent protein and the open pollinated corns from 8.2 to 9.6 per cent protein. It has generally been assumed that corn contains about 9 to 9½% protein. Variations in the protein content of corn are due to differences in soil, earliness of maturity, variety of seasons, and other factors. It is pointed out by Professor Robison that to offset a drop of 1% in the protein content of corn it is necessary to include approximately 3% more of a 40% protein supplement in the ration.

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### Amino Acids in Oats

By F. A. CSONKA, U. S. D. A.

Cleaned and graded commercial oats, rolled oats, and the two byproducts middlings and shorts, all from the same mill run, and one sample of oats of the Richland variety grown at the Iowa Experiment Station at Ames in 1938 were used in this study. These materials were analyzed, by methods described, for their content of total nitrogen, arginine, histidine, lysine, tryptophan, and tyrosine. Cystine was also determined in the samples of whole oats. The two samples of oats differed in total nitrogen content and in amino acid composition.

Removal of the hulls and fuzzy hairs covering the oat grain effected an increase in the nitrogen content, the rolled oats (yield, 40 per cent on basis of green oats) containing 2.95 per cent N, and the middlings and shorts (together, representing about 15 per cent of the cleaned oats) containing 3.44 and 2.26 per cent of N, respectively, as compared with 2.22 per cent in the cleaned oats.

By elimination of certain low-nitrogen components in the milling process, the rolled oats not only became richer in nitrogen than the original oat grain, but also gained in nutritional quality of the protein as judged by the increased percentages of tryptophan, histidine, and lysine. At the same time the percentage of tyrosine was lowered. The protein of the oat byproducts, being low in lysine and essentially lacking in tryptophan, was inferior to that present in the whole oat grain.

### Fundamentals of Livestock Rations

By C. L. SHREWSBURY of Purdue University

Wheat, milk casein and lactalbumin, pure minerals, fiber and all of the highly concentrated vitamin preparations, perhaps could be made an excellent ration for livestock, yet we would not be particularly interested in it because such a mixture could not be fed economically.

The main source of income for the livestock grower is cash return above feed costs and for this reason it is important for feed manufacturers and dealers to know as much as possible about the nutritive value of economical feeds. Moreover, a ration that is nutritionally adequate and economically sound in one section of the country may be too costly to feed in another and hence, would not be a good livestock ration in that section.

It has been our philosophy that farmers should utilize the feeds they have available in their particular section, insofar as it is possible. What we are striving for is the most efficient nutrition of our animals consistent with the feeds that we grow or that can be purchased locally and fed economically. However, there are certain minimum requirements for maintenance, growth and reproduction which must be satisfied if livestock production is to be at all successful.

**REQUIREMENTS OF HOGS.**—Since corn is one of the main crops in the midwest, it makes up a good part of all livestock rations. A major proportion of the corn crop is marketed as fat in hogs. Other feeds such as barley, wheat, oats, hominy feed and rye may be used to advantage as carbohydrate for hogs.

The amount of carbohydrate in well balanced hog rations is determined by the protein requirement. A method for calculating this has been worked out and the results are expressed as the nutritive ratio, which is, for all practical purposes, the ratio of carbohydrate and fat nutrients to protein.

An easy method of calculation is: Total digestible nutrients divided by digestible protein, minus 1. The correct nutritive ratio for all animals varies with age and reflects the different requirements for protein at different ages. For example the recommended ratio for 30 pound growing pigs is 1.1:1 and for 300 pound growing and fattening hogs it is 7.0:1.

Rations for pregnant gilts and sows should

have lower ratios than for older nursing sows. It may be that the present method of feeding protein supplements free choice with corn, in some cases results in the consumption of rations with low nutritive ratios. This might be an uneconomical practice, due to heavy consumption of the expensive protein.

Since corn and other cereal grains are deficient, both in quantity and quality of protein, rations for growing and fattening pigs, and gilts and sows as well, need to contain other proteins of a quality that will supplement the corn.

**HOG PROTEIN SUPPLEMENT.**—The standard protein supplement for hogs has been tankage or meat and bone scraps altho soybeans or soybean oil meal are also used. Raw soybeans are not satisfactory as a protein supplement for young pigs, and moreover, they produce soft pork if not fed under restricted conditions.

Soybean oil meal is satisfactory both from the standpoint of quality of protein and pork

produced. Expeller, solvent or hydraulic soybean oil meals are equally adequate if processed correctly. Dry skim milk and buttermilk, fish meal, cottonseed meal, linseed meal and peanuts are good protein supplements and can be used to advantage under certain conditions.

Purdue experiments by Vestal and trials at other stations have demonstrated that a combination of protein supplements is often superior to single supplements for growth production. Little is known about the fat requirements of swine. Rats require linoleic and linolenic acids in small quantities and it is presumed that other animals also have this need. It is probable that all hog rations contain enough of these acids to satisfy the requirements.

Whether rations of high fat content are better than those of low or whether hogs need any fat at all in their feed cannot be said. We have some preliminary evidence that some fat is advantageous and hope to have a more complete answer to the question in the near future.

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# Direct Reduction Grain Tables

32 lbs. per bushel—OATS

600	610	620	630	640	650	660	670	680	690	700	710	720	730	740	750	760	770	780	790	800	810	820	830	840	850	860	870	880	890	900	910	920	930	940	950	960	970	980	990	1000	1010	1020	1030	1040	1050	1060	1070	1080	1090	1100	1110	1120	1130	1140	1150	1160	1170	1180	1190	1200	1210	1220	1230	1240	1250	1260	1270	1280	1290	1300	1310	1320	1330	1340	1350	1360	1370	1380	1390	1400	1410	1420	1430	1440	1450	1460	1470	1480	1490	1500	1510	1520	1530	1540	1550	1560	1570	1580	1590	1600	1610	1620	1630	1640	1650	1660	1670	1680	1690	1700	1710	1720	1730	1740	1750	1760	1770	1780	1790	1800	1810	1820	1830	1840	1850	1860	1870	1880	1890	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010	2020	2030	2040	2050	2060	2070	2080	2090	2100	2110	2120	2130	2140	2150	2160	2170	2180	2190	2200	2210	2220	2230	2240	2250	2260	2270	2280	2290	2300	2310	2320	2330	2340	2350	2360	2370	2380	2390	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500	2510	2520	2530	2540	2550	2560	2570	2580	2590	2600	2610	2620	2630	2640	2650	2660	2670	2680	2690	2700	2710	2720	2730	2740	2750	2760	2770	2780	2790	2800	2810	2820	2830	2840	2850	2860	2870	2880	2890	2900	2910	2920	2930	2940	2950	2960	2970	2980	2990	3000	3010	3020	3030	3040	3050	3060	3070	3080	3090	3100	3110	3120	3130	3140	3150	3160	3170	3180	3190	3200	3210	3220	3230	3240	3250	3260	3270	3280	3290	3300	3310	3320	3330	3340	3350	3360	3370	3380	3390	3400	3410	3420	3430	3440	3450	3460	3470	3480	3490	3500	3510	3520	3530	3540	3550	3560	3570	3580	3590	3600	3610	3620	3630	3640	3650	3660	3670	3680	3690	3700	3710	3720	3730	3740	3750	3760	3770	3780	3790	3800	3810	3820	3830	3840	3850	3860	3870	3880	3890	3900	3910	3920	3930	3940	3950	3960	3970	3980	3990	4000	4010	4020	4030	4040	4050	4060	4070	4080	4090	4100	4110	4120	4130	4140	4150	4160	4170	4180	4190	4200	4210	4220	4230	4240	4250	4260	4270	4280	4290	4300	4310	4320	4330	4340	4350	4360	4370	4380	4390	4400	4410	4420	4430	4440	4450	4460	4470	4480	4490	4500	4510	4520	4530	4540	4550	4560	4570	4580	4590	4600	4610	4620	4630	4640	4650	4660	4670	4680	4690	4700	4710	4720	4730	4740	4750	4760	4770	4780	4790	4800	4810	4820	4830	4840	4850	4860	4870	4880	4890	4900	4910	4920	4930	4940	4950	4960	4970	4980	4990	5000	5010	5020	5030	5040	5050	5060	5070	5080	5090	5100	5110	5120	5130	5140	5150	5160	5170	5180	5190	5200	5210	5220	5230	5240	5250	5260	5270	5280	5290	5300	5310	5320	5330	5340	5350	5360	5370	5380	5390	5400	5410	5420	5430	5440	5450	5460	5470	5480	5490	5500	5510	5520	5530	5540	5550	5560	5570	5580	5590	5600	5610	5620	5630	5640	5650	5660	5670	5680	5690	5700	5710	5720	5730	5740	5750	5760	5770	5780	5790	5800	5810	5820	5830	5840	5850	5860	5870	5880	5890	5900	5910	5920	5930	5940	5950	5960	5970	5980	5990	6000
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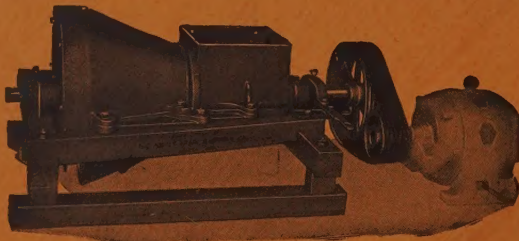
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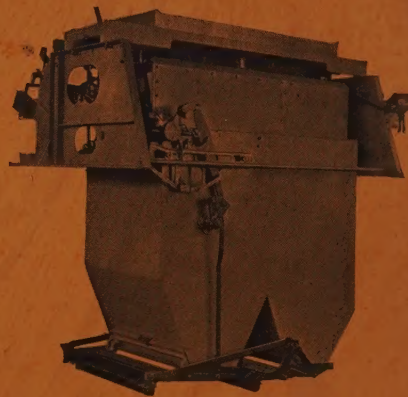
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